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IMPROVING THE PROFESSIONALISM OF THE DEFENSE ACQUISITION WORK FORCE

HEARING

BEFORE THE

SUBCOMMITTEE ON DEFENSE ACQUISITION POLICY

OF THE

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IMPROVING THE PROFESSIONALISM OF THE DEFENSE ACQUISITION WORK FORCE

MONDAY, MARCH 11, 1985

U.S. SENATE,
SUBCOMMITTEE ON DEFENSE ACQUISITION POLICY
OF THE COMMITTEE ON ARMED SERVICES,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:10 p.m., in room 342, Dirksen Senate Office Building, Senator Dan Quayle (chairman) presiding.

Present: Senators Quayle, Goldwater, Bingaman, and Glenn.

Staff present: Alan R. Yuspeh, general counsel; Alan L. Chvotkin and Jonathan L. Etherton, professional staff members; and Marie Chaillet, staff assistant.

Also present: Gerald J. Smith, assistant to Senator Goldwater; Les Brownlee, assistant to Senator Warner; Bernard R. Toon and Bill Hunter, assistants to Senator Quayle; DeForest Hamilton, assistant to Senator Denton; John Rasmussen, assistant to Senator Gramm; Edward McGaffigan, Jr., assistant to Senator Bingaman; Charles C. Smith, assistant to Senator Dixon; Phillip P. Upschulte, assistant to Senator Glenn; and Jeff Minsky, assistant to Senator Cohen.

OPENING STATEMENT BY SENATOR DAN QUAYLE, CHAIRMAN

Senator QUAYLE. The subcommittee will come to order.

I have a prepared statement I will insert in the record.

This is our first hearing since the formalization of this Subcommittee on Defense Acquisition Policy.

We are delighted to have the chairman of our committee here with us today. He has a long, vested interested in acquisition and the procurement process.

Today we are going to hear from two panels. We are going to have a discussion with Mr. Hurtt of Martin Marietta, who will give us a background on how their program managers from the corporation and business side function—the kind of training, the kind of qualifications, the kind of expectations that they have from an industry point of view.

Then we are going to hear from Department of Defense representatives, who will talk about their program managers.

I think we will have a good comparison between the two people who can meet, sit down, and go at it eyeball to eyeball, on how these programs ought effectively to be carried out.

I would say that my bias thus far, in looking at this thing—and we have had some hearings last year—is that we probably should have a dual-track approach within the armed services. When people sign up, whether it be Army, Navy, Marines, or Air Force, they should make a career choice fairly early on which direction they are going to pursue: if they are going to get into the operations side and they want to be a brigade commander, or whatever, they should make that determination so we all will know what kind of tickets have to be punched along the way to get to the top; if they want to get into the Air Force and want to become a wing commander, they should know what they have to do to become a wing commander; in the Navy, if they want to be an X-O of a carrier, or whatever, they should know how to get their ticket punched to get there.

But, what we do not really know is if they want to go up the ladder and become an O-7 or something like that within acquisitions, what kind of ticket they need to get punched to get to the top there.

If we sort of set this out and have a dual-track approach, and start early on, we might be able to have, first of all, an incentive for people to get into the acquisition cycle and to stay in the acquisition cycle, and to be able to attract good people who can spend three-quarters of their time in the procurement process, rather than just one-quarter of their time.

You will be interested to know, Mr. Chairman, that we asked the Department of Defense to respond to an inquiry last December on the background that the program managers have before they take on a program. In some cases it is very, very slim, with very, very few years in the acquisition process. On the other hand, for some of the bigger weapons systems, we have had a good background. I think that some of the ones that are having problems—and I will bring up one of those today—the program manager, and I am not saying that this person is doing a bad job, but perhaps he did not have the training. This is just not one of those things that you can pick up overnight. It takes a lot of time.

That is the direction that we are going to go on.

Tomorrow we will have a hearing on the whole accounting process and what we are going to do.

But today we will discuss how we can strengthen our acquisition cycle from a career path, to getting people in there and getting them to stay there.

Before I call on Mr. Hurtt, I would ask the chairman if he has anything he wants to say before we begin.

Senator GOLDWATER. Mr. Chairman, this is a subject that has become very, very dear and close to my heart. I am very happy that you are taking this on, as you have.

I look out at the men who are in uniform, and when they entered the military schools and started taking their training, the last thing in the world that ever had entered their minds was that some day they might be a manager.

They went into the service to become operational people, and that was the story.

Not suddenly, but after a long period of time, following World War II, it became more and more obvious that just as important a

function of the man in uniform, as actual operational work, was the management of the weapons systems that he would have to use or his colleagues would have to use.

Now, I am very, very happy with the way the military seems to be taking hold of this. You don't have to be a genius to recognize that the great majority of our manufacturers run rather roughshod over the unmanaged discipline of the Armed Forces. I want to see that change, and you do, too.

I think when we give contracts in the hundreds of millions and billions of dollars, the manufacturer actually should relieve us of any necessity of worrying. But, by god, they haven't.

I hope the military services will all take it onto themselves to follow the example of some; I particularly think of the Navy and their competitive organization. I would like to see this in the next 2 or 3 years.

I am convinced that there are just as many people sitting out there in uniform around this world who would rather give up operation and get behind a desk as who would not. This does not reflect at all upon their lack of patriotism or anything else. They just feel they can do a better job there. I think we can hack the job, and I think you are doing a good job in getting this started.

I am going to be watching you like an old eagle.

Senator QUAYLE. And telling me what to do, as only Senator Goldwater can. [General laughter.]

We look forward to your contribution as always.

Thank you.

Senator Bingaman, do you have any comments before we begin?

Senator BINGAMAN. I have no opening statement.

Thank you, Mr. Chairman.

[The prepared statement of Senator Quayle follows:]

PREPARED STATEMENT OF SENATOR DAN QUAYLE, CHAIRMAN

The Subcommittee on Defense Acquisition Policy of the Senate committee on Armed Services is meeting this afternoon for the first time since its creation on March 7, 1985. Upgrading the task force on selected defense procurement matters to a permanent subcommittee should make it very clear how seriously the Senate Armed Services Committee views the issue of greater efficiency in defense procurement. I am proud to have the opportunity to continue chairing this vital effort. I am pleased to announce that my distinguished friend, Senator Carl Levin, will continue to serve as ranking minority member and I welcome our other members, Senators Warner, Goldwater, Humphrey, Gramm, Bingaman, Dixon, and Glenn.

It is my intention that the subcommittee will continue to build on the work that the task force has been undertaking over the last year. We must continue to examine all aspects of defense acquisition to ensure that we are procuring the right weapons at a reasonable cost. Our focus must remain not on temporary management issues or quick fixes, but on the fundamental problems of the complex defense acquisition system.

In building on our earlier work, we must strive to exercise a proper oversight role. Our examination of acquisition issues must reflect a desire to sufficiently understand the technical complexities while not losing sight of our general goal of more efficiency in defense procurement.

Today we will be receiving testimony on one of the most critical parts of the defense acquisition system, the acquisition work force. In December, the task force held a hearing on the career development of our acquisition work force. This afternoon we shall examine the issue of developing a qualified, highly-motivated corps of people to administer our defense procurement process. I intend to explore ways to achieve this goal within the context of the defense authorization bill for fiscal year 1986.

Any proposed initiatives in the acquisition personnel area must recognize the different, but complementary roles of the program manager, the contracting officer and the others in the system. We must recognize that the formal qualification requirements for each may vary. Increasing the qualification requirements for each of the players in acquisition will not be enough if we do not have an adequate program of incentives and rewards for people to seek careers in acquisition management.

I have carefully reviewed the responses to the questions submitted for the record during the task force hearing on December 13. I have some very specific concerns about the information which each of the services supplied to us on the acquisition experience and training of current program managers. By using the services own definitions, each of the program managers has sufficient background in the acquisition, support and maintenance of weapon systems to properly carry out their missions.

The problem, though, is with the definition of what constitutes experience in the acquisition, support, and maintenance of weapon systems. According to the services, virtually every operational assignment counts as acquisition background. But if we define our terms more narrowly and more properly, a more disturbing trend emerges. We find people with little significant acquisition background serving as program managers.

The pattern seems clear to me. Each of the services has a very clear career path for their operations personnel. Every officer knows how he must get his ticket punched if he is to attain flag or general officer rank. Because of the importance of weapons acquisition, we need to have a clear career path for program managers early in their careers with potential for attaining flag or general officer rank as well.

The career path must be clearly separate from the operational side of the service. Everyone recognizes that you can not take an officer who has spent his entire 20 year career procuring weapon systems and put him in command of a carrier battle group. We now have to recognize that we should not take an officer with 20 years of predominantly operational experience and put him in charge of a multi-million dollar acquisition program. We need a system to identify potential program managers early in their career, so that effective training and career assignments will support this critical mission.

Bifurcating the services into an operational officer corps and a program management corps has a precedent in military history. As former Deputy Secretary of Defense, David Packard testified before the Senate Armed Services Committee on November 16, 1983,

"Traditional military forces consisted of a fighting corps and a corps of engineers . . . often the outcome of a battle or a war was determined by the skill of the engineers. Today the outcome of a battle or a war will be determined by the quality and capability of the weapons as well as the skill and the motivation of the soldiers and their leaders."

The hearing today has been structured to give us some insight into the defense industry's development of career acquisition managers, as well as to allow us to review the progress of the military departments in this area.

Senator QUAYLE. Our first witness is Mr. Caleb B. Hurtt, who is the senior vice president of Martin Marietta Corp.

Welcome, Mr. Hurtt.

Please proceed at your discretion.

STATEMENT OF CALEB B. HURTT, SENIOR VICE PRESIDENT, MARTIN MARIETTA CORP.

Mr. HURTT. Thank you, Mr. Chairman, Senator Goldwater, and Senator Bingaman.

I am Caleb Hurtt, and, as you said, I am senior vice president of Martin Marietta. I am also president of Martin's Aerospace Co.

I am very pleased to be here today before you to discuss an area which we, at Martin Marietta, believe to be the heart of our operations, and that is the role of the program manager.

I would like to stress at the outset that the program manager holds a very responsible, a very key position in our management structure. He has the principal responsibility for the success of his

program, regardless of the size of the program or the complexities of the program. He really is the man, as far as we are concerned, when it comes to managing our program business.

In most respects, the program manager is truly a general manager. He is not a figurehead. He is not a coordinator. He is the person who is responsible for the design of a product, the engineering, the cost, the production, the quality, the test, the schedule, and I will say, fundamentally, what we call mission success—that is, that it works.

Because we, Martin Marietta, are a large, complex, matrix-type organization, the program manager has to understand how to do business within our framework, and, of course, that means our management style, it means our culture, our approach to program management, our dedication to mission success.

At present, we have about 400 program managers and program directors throughout our aerospace operations. In addition, we have identified about 150 people who are in some form of development or training, preparing themselves to move into program management slots.

Our culture requires that the program manager understand the roles and the responsibilities of our central, or functional, organizations, that is, finance, contracts, planning, legal, personnel, and labor relations, materiel, marketing, engineering, and the way his program should and properly can interface with those central functions. These central functions are the tools which the program manager must use to meet his contractual obligations and his commitments. They also provide a most critical element to the management process, that is, the check and balance or monitoring in the sense of our own internal oversight.

The job of the program manager is to use the resources assigned to him—that is, the physical resources, the financial and the people resources—to provide a quality product, on time and at a profit to us.

He has an obligation not only to his customer, to whom he has a very major obligation, but he also has an obligation to the company and to those resources that he is to apply.

The real challenge for top management becomes how to find and how to develop qualified people for this important responsibility of being a program manager.

Typically in our case a program management candidate is in the 30- to 40-year-age bracket, he has had some 3-plus years with us in terms of learning our folklore. He is usually, but not always, an engineer, and he is clearly perceived by us to be what we call a high potential person. That is to say that when we go through our people evaluation process that we have categorized, he is a high potential person.

We prefer to grow our program manager from within our organization. Occasionally we have had success in hiring very competent managers, but we have found it takes time for these managers to learn our techniques, our style, our way of doing business, our methods of check and balance.

More often, it is efficient to pick people who have had long and constant exposure to our system—that is, those "high posts" that I spoke of—and then, too, these are people who are a known quality,

who have a reputation. We have a good starting point, if you will, in making a program manager.

Our selection process generally begins with young technical people. We look for people with clear indications of drive, of ambition, of initiative, a sensitivity to people, who have a positive view of themselves, who have a track record of being able to get things done.

Once identified, these high potential candidates are given considerable career development counseling. We do articulate and evaluate their strengths and weaknesses, and we have Training Programs that we tailor specifically to these individuals to meet their needs or to deal with their weaknesses, and that are designed to help them grow into competent managers.

Our program for improving the capabilities of our managers normally consists of a combination of on-the-job training, carefully selected Academic Programs, and job rotation. I would add that on-the-job training is the most fundamental thing that we push on.

Job rotation is often through several central functions to give the candidates sufficient feel and understanding of organizations which will be key to them, such as finance, contracts, manufacturing, and quality control, in addition to engineering.

On-the-job training within the program area itself gives them closely supervised exposure to the various elements of program management.

Typically, when a candidate is deemed ready, he is started with an assignment to manage a small program, and subsequent assignments move him on to larger and more complex jobs in keeping with his demonstrated ability.

Simultaneously with their first daily assignment, candidates are often given specific training, which can range from basic management and supervisory courses to much more sophisticated programs, sometimes in an academic setting. We have many courses available, and they include the following.

First is a course called effective supervisory practices. This is a basic education in management techniques and behavioral science.

Another we call Advanced Management Program, which we conduct here locally for our people. Here is the application of management theory to case studies and the development of a personal improvement plan for implementation on the job.

We have for our senior people also conducted here a senior management seminar. This is a simulation exercise requiring a general manager's level of perspective.

We have a course called program solving and decisionmaking. Here we use the tools and techniques for systematic analyses and problem resolution.

In addition, there are courses specifically designed for program managers by our development personnel with the aid of key members of management and outside consultants. We put these programs on periodically, and I will say that when we put them on, we very carefully select candidates. Such a program might be one that takes place 1 or 2 days a week for perhaps 2 or 3 hours at a session, and might involve some 25 to 30 sessions, covering the various aspects of the business.

The courses do include communications, labor relations, contract management, pricing policy, marketing techniques, estimating and cost management, configuration control, quality control—these various things.

The programs are designed to explain and develop the unique role of the program manager and to differentiate the managerial function between the central organization and the program functions.

The discussions lead the candidates through the major elements of the program management process, including explanations of what to do, what not to do, how to do it or get it done, and why our experience says to do it in a particular fashion.

The practical problems associated with each of the various elements are emphasized and are illustrated by exposing the candidates to actual experiences, that is, the case study sort of method. This gives the candidates opportunities to apply their own ingenuity to contrived or specific situations provided by the discussion leaders.

The courses are taught by key management personnel from our central organizations, together with experienced program managers and professionals from outside the company.

While most of the courses are conducted on our premises, we frequently utilize some of the well-known management training programs, such as Harvard and Stanford Universities—in fact, we do typically send two people a year to the Harvard AMP program—we sent them to the Wharton School of Business, to the Sloan Program at MIT. We typically send one person a year to Sloan.

We also use various program management courses offered by the Defense Systems Management College where selected Government contractor managers learn contracting along with their Defense Department colleagues.

We have a rather extensive succession planning program. I say that it is rather extensive, and that is not an understatement. We go at succession planning quite rigorously. Here candidates are identified for filling key management roles. Once we identify these people, we really begin the process for making sure they are ready for their eventual elevation in the management ranks.

We not only identify these persons, but we do monitor their progress in the development sense. Under this plan, each program manager has at least one identified backup or replacement candidate—at least one, and we usually look for two or three.

These candidates are all brought along in the manner that I have described—that is, their abilities are evaluated. Training is offered where needed so that when openings occur, they can be given top priority and consideration for promotion to these positions. Our track record in that is really quite good.

We typically will have 75 percent of our promotions identified as people from our succession planning.

In conclusion, our program managers clearly run our business. They are professional. They are in a highly regarded career field within our enterprise. In fact, I think I would be quite safe in saying that most of our senior people at Martin Marietta have at one time or another been program managers. In fact, in my own

personal career, more than half my time has been in the program management arena.

This concludes my prepared remarks, Mr. Chairman. I would be very pleased to answer any questions that any of you may have.

Senator QUAYLE. Thank you very much, Mr. Hurtt.

Let me pick up where you concluded.

You say that program managers, as such. run your profession.

Mr. HURTT. Yes, sir.

Senator QUAYLE. In other words, what you are saying to me is that most of the top officers—and I think this is what you said—most of the top officers at Martin have at one time or another been a program manager.

Is that correct?

Mr. HURTT. Yes, sir; that is correct.

Senator QUAYLE. When a person becomes employed at Martin and they want to look at a way as to how to get to the top, whether it be CEO, president, senior vice president—one of the top slots—I presume that they realize that to get to that top position, one of their requirements or one of their responsibilities during this time is to be a program manager.

Is that correct?

Mr. HURTT. Yes, I think it is—if I can exclude from the statement several functions, such as a person who wants to be chief financial officer. But, on the other hand, he will want to have had program experience. He will want to have been the chief finance man on a program, or the chief business man.

I have had many, many experiences of employees coming to me and asking how can I get to be on a program, how can I get to be a program manager. I think the people do realize that it is tough for them to be a very senior executive in our corporation without significant program management experience.

Senator QUAYLE. So, the attractiveness there, to the people just getting into the business, just out of school and coming into Martin and making the determination that they want a career with Martin Marietta, a large defense contractor, one of their strong incentives to become a program manager is a way to get to the top.

Mr. HURTT. Yes, sir.

Senator QUAYLE. In other words, they see a clear career opportunity to the top of the corporate ladder, and one of those areas of responsibility is to become a program manager, and, therefore, they had better get into the program management training seminars, et cetera, if they want to get to the top. This is fairly well understood once they first get into the system, is that correct?

Mr. HURTT. I think that is correct.

Very frankly, we have almost the opposite problem in our own case. Very good engineers sometimes perceive that they are career limited if they do not have a natural instinct to be a good program manager. So we have to go out of our way to explain to good R&D types the need for them to stay in their chosen career of being a truly focused technical person.

Senator QUAYLE. Let me ask you this question.

I am the first to admit that we have improved in the Department of Defense in focusing on how we can get more effectiveness in our acquisition systems, how we can get better trained people and more

qualified people. We have some darn good people out there right now. But from the experience that you have at Martin, and since a Program Manager is such a key position, and so essential to becoming the top operating officer at the corporation, I wonder if you might give us some idea on how we might be able to get more incentives within the armed services, within DOD, for people to become program managers.

Let me go a little bit further.

It has been said in the past—and I think it is probably more in the past, although I think we still have some of the problems right now—that well, OK, I have to put in a certain amount of time to be a program manager, that is what I have to do, but that is not really what I want to do, I would rather go ahead and stay in operations and be the XO of a carrier or the wing commander, or whatever it might be.

I wonder if you would give us some insight in how we might make the program a more attractive position within the Armed Forces than it is today, from your viewpoint, where it is a very attractive position in the private sector.

Mr. HURTT. Well, I will give it a try.

My problem is that I have not recognized that it is not, very frankly. I do believe the military has some very, very excellent program managers, and I have had the opportunity to work with quite a few of them.

Fundamentally, I do believe, if I were to look at it as you have suggested, that if there is a limitation to it, it is the amount of time that is spent at it by some of the officers; that is, for some of them it is a short stop along some other fundamental career path. But those that I think of, who have tended to make it a career, that is, who have spent many, many years at it, I think are superb at it and do very, very well. I personally have not observed significant shortcomings in these people who I think of.

Senator QUAYLE. Well, let me give you a hypothetical and perhaps not the ones that you have run into.

Let's just assume that many of the program managers that we have right now either do not have an extensive background in acquisitions, have very little experience, though they are highly qualified people, within the acquisition cycle itself. What kind of incentives could you suggest to us that we make to the program manager within the armed services that will make it even more attractive and get even better people into the system? Quite frankly, we need people out there, fighting, and with high morale, with leadership out on the battlefield, but we also need to make sure that those weapons are not only good and are going to do what they say they are going to do, but, with the fiscal crunch that we have, we just have to be more efficient than what we have been in the past.

So, I am wondering what additional incentives that you might suggest, from an outside point of view, here in this hearing, on a hypothetical basis that we need to get more people into the system and even better people than we have right now.

Mr. HURTT. Yes, sir.

Chairman Goldwater mentioned at the beginning of this hearing that we perhaps need to professionalize the program manager's role more. Personally, I would agree with that.

If I nitpick it again, it is that orientation toward people being on another career path for their perception of how to get promoted and elevated within the system.

In fact, if I look at the military versus my perception of working with other Government agencies—and by this I mean such as NASA—one thing that I see is, in the case of NASA, a program manager is there for a very, very long time. He does not rotate out after 2 years or after 3 years. He is there for the life of the program.

This I think is virtuous, that is, the ability to stay on the job, to retain the memory of a program and the lessons learned from other programs so that they can be applied to the new endeavor. I think this is very important to doing good program management work.

Now, the incentives, to me, have to be associated with those things that are important, and I think in the military that very much is a perception of being able to be recognized by one's peers. I think that has the obvious connotations of promotability and not perceiving that I get to O–6 and, boy, that is as good as it gets, but the ability to truly perceive that one can go up through all the ranks.

Senator QUAYLE. You said in your testimony that one of the more important educational requirements of your program managers, and I am paraphrasing, was on-the-job training——

Mr. HURT. Yes, sir.

Senator QUAYLE [continuing]. Getting out there, getting on the job and seeing how this is done.

Before one becomes a program manager, how much on-the-job training do they have? How many years of experience do they have in working with these programs, as a general rule? Are they like deputy program managers before they become program managers? Would you amplify a little bit about this on-the-job training that you talked about?

Mr. HURTT. Yes, sir.

I think most often that entails, I will take the danger of saying, "general circulation," which I think is one in which, or perhaps, well, one, like myself has had experience.

When I came up through the process, I started, of course, as a young engineer, out of engineering school. My first jobs were oriented toward doing flight control design and test work. This meant working in laboratories, and so on. But the essence of what I was doing was oriented toward making something happen on time within costs that worked. That, as a fundamental qualification, then, attracted me to being assigned to a program where my first program assignments were as an assistant project engineer.

But, as an assistant project engineer, one, then, is dealing with the scheduling of events to occur, you are dealing with what they will cost, in the case of engineering you are dealing with the technical correctness or adequacy of the task at hand and making that happen on time and within budget.

As an assistant project engineer, you then go on to become a project engineer, which leads to becoming a project manager, a technical director on a program or a program director, and in the case of our larger programs, that eventually leads to a role that, in fact, is a vice-presidential title, which is a significant status in our environment.

I guess I would also comment that in our sense of going through these things, we have a full spectrum of titles, a full spectrum of pay, as a function of the size of the program, the demands of the program, its complexities and what we think is necessary to effectively implement it.

But I do believe that, in the sense of starting, the genesis really is one of taking people at very early ages and giving them exposure to how you make things happen, that is, to getting the task done to a schedule and to a cost.

Senator QUAYLE. Let me ask you one final question and then I will yield to Senator Goldwater.

About how many years of experience in the acquisition cycle would a program manager for Martin have? How many years would he have experienced in the field of acquisition processing?

Mr. HURTT. I would expect today that our average program manager would be something in the ballpark of 45 years old, and he probably graduated from school at 21 and had 2 or 3 years of military service. So he has probably been in the industry for at least 20 years.

Most of that time, he will have been working on technical tasks, but almost always he will have been associated with a specific contract, with the contract's terms, conditions, performance requirements and its funding restraints.

So I am going to say that he has had almost 20 years of very related program management experience and activity. He knows all the buzz words and acronyms.

Senator QUAYLE. Mr. Chairman, I think therein lies really one of our real challenges. Our program managers have some experience, but not nearly the experience that they have in the private sector. I think 20 years is probably a fairly good benchmark, day in and day out, with nothing in the operations, just in the acquisition cycle. To try to get parity and equity there, to get these people in the system and keep them there, why we might get 15 or 16 years as an average, and that would be a lot better than what we have right now.

Senator Goldwater.

Senator GOLDWATER. I am glad to have this opportunity to be asking these questions to the only person in civilian clothes here today.

The military managers that you employ, could you tell me what major weaknesses you have observed in them?

Mr. HURTT. If I tried to generalize, Senator, I really don't identify more weaknesses than the issue we have been sort of hitting on, which is the amount of time and experience that one has had at the task.

I will think of some of the military managers, and some that I would think of would be, for example, Bill Fiorentino, who was the program manager for the Army on the Pershing. I thought, very

frankly, that then Colonel and now Brigadier General Fiorentino was a tremendously capable program manager. That program, coming in essentially on cost and very much on schedule—although we had a few sweaty palms on the way—one with a highly concurrent production and development at the same time, was a tremendous success. General Fiorentino deserves much of that credit for that being the case. He is a very mature person.

I think of General Abrahamson, who now runs SDI. He is a tremendously successful program manager from the Air Force, with the F-16, with the space shuttle—just tremendous.

There is much of that.

Again, the only generic weakness that I see is that associated with time.

I, personally, do not think the issue of rank—because I think there are many examples of program managers being promoted into significant ranks—is as much an issue as is the time to stay on the job and not rotate out after 2 or 3 years, but to stay with the job as a function of its requirements. That often ought to be 5 years or 6 years.

Senator GOLDWATER. Well, I can recognize your inability to see that. But, to me, one of the major problems that we face in the military today in providing adequate and proper management is the fact that that manager does not know whether or not he is going to stay up with his class and get promoted with his peers.

I think that problem is a military one. It is certainly not a problem of yours.

I am talking with the services toward the end that we create a management function, and we find volunteers across the board in every service that are not necessarily convinced that they have to go back out and get sea duty, or have to get back out and fly an airplane or run a tank, that they begin to recognize the great challenges and responsibility of managing a program.

You have cited some fine examples, and I could add any number to them. For example, there is our B-1, which is way under cost and way ahead of schedule, and I think mostly because of one man. But he is a major general.

Now, you take a young major, that is, major or lieutenant colonel, who gets sent up to the Pentagon for these purposes, his first question is am I ever going to get promoted, do I have a chance, and if I don't, I want to get out of this job and go back to the field.

These are problems that I think we have to solve in the military.

Do you believe, with your long experience, that the man that we send you in uniform necessarily has to have a degree in business, or if he has a master's degree or even more, can you or the military make a manager out of him?

Mr. HURTT. My personal view has been one that a technical education is more important than a formalized business education, per se. I am speaking of that now, as we deal with, really, the high technology kinds of programs.

So many mines are in that field that one must cross to go with a development of a major, new, technological undertaking that I really believe the sense of technology is a more important single thing.

On the other hand, I have to hasten to add that a good engineer with the broadening of a business education, that is, a bachelor's degree in engineering and a master's in business, I don't see how you can beat that either for the military or the civilian aspects of program management.

Senator GOLDWATER. Of course, training a man to be a manager in business is one thing. But getting a man from the service, moves to Washington without knowing what he is going to do—and then we have the other side of the management problem. The man in uniform that we send out to your factory and the man at the desk in Washington who works with him, form a different kind of problem than you are concerned with or should be concerned with.

As I see it, the man in the uniform comes to your factory to see to it that the product you are making for whatever branch of the military you are making it for follows the specifications, the quality, and so forth. I would imagine that you would not do anything to turn his mind away from that.

Mr. HURTT. No.

I believe his job is more than that, Senator. I think it is absolutely those things that you speak of. But in my personal experiences, it is almost always the case that the specification is not 100-percent complete; that, as time goes on, there are things that one discovers that say there are better ways to do it or we are slightly on the wrong track and need to change in that sense of the word. In that sense, for the Government program manager to understand exactly where things are versus where they ought to be is just absolutely crucial. That is, I think he does much more than simply say are you following the contract precisely as it was written. That is an important part of it, but there is much more than that.

Senator GOLDWATER. Well, to close up, I think that the successful uniformed managers are the ones who can come to you and say look, you are not doing this right, and be able to explain to you where and why you are not doing it right.

Mr. HURTT. I agree with that 100 percent, Senator.

Senator GOLDWATER. Well, that is the result that I would like to see our managers achieve. You first have to get the services to recognize that it is a different ball game today. I have even talked to the academic sources of our officers, and they do not agree that we have to do any special training yet. The training can be acquired because it is all rather technical and it is specific.

Well, I do not have anything else to add, Mr. Chairman.

Mr. HURTT. I would just add, Senator, if I may, in my own case, again, Martin, having sent me to several outside universities for education above and beyond what I started with helped me no end in being an effective program manager. It absolutely got me in a mode where I was not personally intimidated, if you will, by things that perhaps I should not have been. By studying finance, by studying contracts, by studying business organization, and things like those, it helps a person a great deal. I personally believe that outside education is very, very helpful to the development of a program manager.

Senator GOLDWATER. Well, having been a corporate person myself, I can agree with everything you say. But at least what I am

talking about is the man in uniform who feels his chief responsibility is not to Martin Marietta.

In fact, he might even be anti-Martin Marietta if it takes that to get a good Lantirn out, for example. I am just using that as an example.

Mr. HURTT. Yes, sir.

Senator GOLDWATER. Those are all the questions I have.

Senator QUAYLE. Thank you, Mr. Chairman.

Senator Bingaman.

Senator BINGAMAN. Thank you, Mr. Chairman.

You say you have 400 program managers, approximately?

Mr. HURTT. Yes, sir.

Senator BINGAMAN. What is the average salary of those program managers?

Mr. HURTT. I would say that the salary would have a very, very broad range. When I say a broad range, I will say it is similar to the rank in the military, where you might have a major general running one program and you might have a captain running some other program, which will be small, perhaps, technology kind of program, and we're under the same issue.

Senator BINGAMAN. Would you just give me the range, please?

Mr. HURTT. I guess if I were to go with a range, I would say probably on the low side it would be $30,000 a year, and I think the high side would be a vice president of considerable stature who might be at $100,000.

Senator BINGAMAN. I am wondering, just as an uninformed question, if, in fact, a person were trying to decide on a career path and he had the chance of being a program manager for Martin Marietta or a program manager for one of the services, what reasons do you see why he would go into the service and do it—under the present arrangement?

Mr. HURTT. I happen to see quite a few reasons.

I had the good fortune of serving in the U.S. Air Force myself, and it was with considerable handwringing that I elected to leave. I do believe that the military offers people a great feeling of participation in what makes America a great country, that is, leading toward a strong defense of this Nation. I think that is tremendously important to many of these people. I think the challenges for those who get into the program management business of working on some very, very exciting programs, and to lead those efforts just cannot be found any place else.

Senator BINGAMAN. Do you think the opportunity is greater in the service than it would be with defense contractors, that is, to get involved in exciting work?

Mr. HURTT. No, sir; but to be the fundamental leader. There is only one SDI leader, as an example, and he is not an industry guy, Senator.

I believe that the fundamental leadership of these things is with the services. The fundamental articulation of the requirements is the services.

Senator BINGAMAN. You say in your prepared statement that the prime responsibility for the success of the program is with your program manager, and that includes the cost, the quality, and the schedule and all.

Mr. HURTT. Right.

Senator BINGAMAN. Do you have many instances where your program managers have their careers aborted or interfered with drastically because of failures in costs and failure to meet schedules?

Mr. HURTT. Yes, sir; in fact, I think I can tell you that I recently had the very unpleasant task of asking a very senior person to leave our corporation for that reason.

Senator BINGAMAN. Do you know of examples where that has occurred with program managers in the military as well?

Mr. HURTT. Yes, I think I do. I think I can think of cases where in the military a task maybe was perceived to not be done as well as it should and a person was moved. I don't know of anyone who was fired, per se, but taken off the job, moved to another job, and clearly had his promotion track record diminished, I would say yes, sir, I do know of cases.

Senator BINGAMAN. In your view, in order to make the military project managers, program manager's system work, would we have to build the same kind of accountability into that that you have in the private sector?

Mr. HURTT. Oh, yes, absolutely. In fact, I do believe it is more difficult in the military in terms of the accountability.

Senator BINGAMAN. Do you think that the same accountability exists today in the military that exists in the private sector?

Mr. HURTT. At the higher levels, Senator, I would have to say yes, sir, I do. If I look at the MX program, if I look at the B–1 program, if I look at the Pershing missile program, those programs, in my opinion, the leaders of those things have the same sense of identity to success and failure that I think our people do.

Senator BINGAMAN. Let me ask about your suggestion that the best training for a program manager is a technical background. Do you think we should be hiring our program managers in the military from the corps of technically trained people as well? Should that be one of the criteria for determining who we would want to move up this career ladder?

Mr. HURTT. In my personal opinion, yes, sir.

Now I do believe that the service academies provide a very excellent engineering background for those out of the service academies. But I do very much believe that that should be a general criteria, not literally a pass-fail criteria. But if you have a choice between two who are equal in other regards, I would definitely go for the one with the technical background.

Senator BINGAMAN. In order to get the best possible program managing capability in the military, do you believe we should plan on keeping the same kind of retirement system we have for the people who are going up through this system that is presently in place?

For example, I gather that your 400 program managers do not retire on the same kind of basis that military program managers could, in the same length of time, and all. Would you think that that would need to be rethought as well in order to get competent people and the quality that we need in the military?

Mr. HURTT. I am not sure of the extent to which I am smart enough to really debate the issue or discuss the issue of military retirement.

I would observe, though, that there are many people in the military for whom this is one of their reasons for being there. It is probably not the reason they started.

But once they had 10 years, 12 years, in the service, it might be one of the reasons they are staying for another 10 or 12.

In this sense of the word, I do think the military retirement thing is virtuous.

Now the issue of what it does to the budget and so on is another issue. But I will say that part of it is clearly one of the things that makes people stay.

It is true that that system is different than our system. Very few of our people, in my opinion—and I am talking of the guy who is 45—thinks of retirement at all. He is an awfully long way from it, so he does not think about it.

So it is not a particularly attractive situation, in my personal opinion, from the industry perspective for retirement to be a particular factor until a person is roughly 50 years old, perhaps 45, but certainly not 35.

Senator BINGAMAN. Don't you have people at age 50 who are thinking of retirement at Martin?

Mr. HURTT. We have some who start thinking about it, but they can't do it.

Senator BINGAMAN. When can they?

Mr. HURTT. Our earliest retirement is age 55, and to receive anything at all a person must have 10 years with the company at that age.

Senator BINGAMAN. What is the normal time that your people retire?

Mr. HURTT. Well, we just moved our normal retirement from age 65 to age 62, so 62 would be our normal retirement.

Senator BINGAMAN. That is all I have, Mr. Chairman.

Thank you.

Senator QUAYLE. Thank you, Senator, and thank you very much, Mr. Hurtt. We appreciate your testimony.

Mr. HURTT. Thank you, Mr. Chairman.

Senator QUAYLE. Next we will hear from a panel consisting of Admiral White, General Thompson, and General Skantze.

Gentlemen, I have no special order. Why don't we begin with the gentleman to my left.

General Thompson, why don't you proceed first. And please use the microphone so that I can hear you better and the people in the rear of the room can hear you better.

STATEMENT OF GEN. RICHARD H. THOMPSON, U.S. ARMY, COMMANDER, ARMY MATERIEL COMMAND

General THOMPSON. Sir, I have a statement that I would like to enter into the record and I have a much shorter version that I would like to read, if I may.

Senator QUAYLE. We will put your entire statement in the record.

Please proceed.

General THOMPSON. Mr. Chairman and members of the Senate Armed Services Subcommittee on Defense Acquisition Policy, I am

Gen. Richard H. Thompson, the commander of the U.S. Army Materiel Command.

In response to your request, my discussion will address career development of our military and civilian work force in the acquisition career field.

As Army proponent for the military research, development, and acquisition, RDA, functional area, and the procurement and production functional area, I am responsible for the establishment, development, management and evaluation of RDA and procurement officer career professional development.

Under our revised personnel management system, Army career patterns for military officers will allow both a dual and a sequential tracking option. The majority of officers entering active duty will serve in their basic branch, such as quartermaster, for a period of 6 to 8 years. They will then be assigned a functional area, such as research and development or procurement, and from that time forward, the officer will alternate between functional and organizational assignments every 3 years.

However, the Army has recognized that, in order to meet the skill requirements for project managers, contracting officers and key acquisition staff personnel, some of these officers should be allowed to enter into these functional areas early in their career and remain there on a permanent basis.

The RDA functional area is available to all commissioned officers who possess academic degrees related to engineering, physical science, or business. Officers will normally enter the RDA functional area at the grade of captain. Formal training includes the advanced civil schooling program, required military functional training courses, and other pertinent training courses available in our military school system.

The RDA field area is one of the fundamental building blocks leading to competitively selected and specially trained officers displaying potential for key acquisition management assignments.

As to the procurement functional area, the career path for military procurement officers is considered among the best in the Army. Normally, an officer first will be exposed to procurement in year 6 to year 8 of his career. By this time, he has learned his basic leadership and management skills, understands the Army's user perspective and has some commodity experience. From that time forward, the officer will follow a dual or sequential track as previously described.

At the grade of lieutenant colonel, there are currently 28 command positions which are available to most qualified procurement officers.

At the colonel level, 28 commands are also available to most qualified procurement officers.

Now this represents a significant increase since 1981.

Additionally, there are now several general officer positions which have been designed specifically as procurement positions.

The combination of several command positions available and the opportunity to be promoted to general officer provides an excellent career path for procurement officers.

In recognition of the Army's need for top level materiel acquisition and logistics managers, the Army initiated a new program in

October 1983, to develop officers in defense materiel acquisition management. We call this program MAM.

MAM pulls together for the first time all of the functions and specialties involved in materiel acquisition into one career program. Early on, it develops commissioned officers with the broad, multidiscipline level of expertise specifically related to the total integrated acquisition process.

The best qualified officers are then certified as materiel acquisition managers by a MAM certification board conincidental with their promotion to lieutenant colonel.

This pool of officers is groomed for acquisition management assignments and positions of high responsibility, such as assistant project managers, product managers, or the Army staff.

With regard to the committee's proposals for improvement in the quality of the defense acquisition work force, I am generally in agreement with most of the points. I concur that 4 years of weapons systems acquisition experience should be a prerequisite to a PM appointment.

We agree with an annual SecDef report to Congress covering goals, plans, and progress for improving the professionalism of the acquisition work force.

We agree with the 4-year minimum duty tour for major program project managers.

And we agree with establishing a requirement for a systems acquisition career program in the military services.

We think our MAM Program currently accomplishes this for our Army.

In closing, I would summarize by saying that the Army and the Army Materiel Command have programs in place to assure a continuing high level of both military and civilian managerial excellence throughout the entire spectrum of the acquisition process.

In keeping with the President's direction, as contained in Executive Order 12352, the Defense Contracting Acquisition Career Management Board convened a special task group, referred to as task group VI, to implement requirements of the Executive order. The task force results are currently being staffed within the military services prior to final implementation.

This increased career management emphasis is expected to improve the professionals of our procurement work force. However, we are not sitting on our hands, waiting for someone to tell us what needs improvement. We are taking our own initiative to insure that we are prepared to meet the challenges of the ever-changing acquisition environment in our commitment to provide our soldiers with high-quality equipment when they need it.

Thank you, sir.

[The prepared statement of General Thompson follows:]

PREPARED STATEMENT OF GEN. RICHARD H. THOMPSON, U.S. ARMY

The command's fiscal year 1985 budget amounts to about $27.2 billion dollars, with the largest share ($18.8 billion) earmarked for procurement of weapon systems, equipment, and major assemblies. When our appropriated prior year funds of $6.2 billion and $2.4 billion in stock funds are added, our fiscal year 1985 total obligation authority amounts to over $35.7 billion dollars.

The diverse business of AMC requires the skills of many specialists, in many career fields, both military and civilian. They cross the entire spectrum of disci-

plines from engineering, procurement, quality and reliability, supply, maintenance, and transportation to records management, accounting and public affairs to mention but a few. Although most all of the disciplines contribute to the acquisition process, I will limit my discussion to those most directly involved. I'll discuss the military specialties of research, development, and acquisition; procurement; and a newly implemented military career program called Materiel Acquisition Management, or MAM. On the civilian side, I'll discuss the Engineer and Scientist and Procurement Career Development Programs and our civilian counterpart to MAM, the Logistics and Materiel Acquisition Management Program, or LogAMP. Following that, I will address our training with industry program, our program or project management system where all the acquisition management and logistics skills must meld together; and finally a few words about our civilian senior executive service (SES).

Responsibility to serve as Army proponent for the military research, development, and acquisition (RDA) functional area and the procurement and production functional area was transferred from the Department of the Army to the Army Materiel Command in 1981. Accordingly, I am responsible for the establishment, development, management, and evaluation of officer career professional development.

Under our revised personnel management system, army career patterns for military officers will allow both a dual and sequential tracking option. The majority of officers entering active duty will serve in their basic branch such as quartermaster for a period of 6–8 years. They will then be assigned a functional area such as research and development or procurement and from that time forward the officer will alternate between functional and operational assignments every 3 years. However, the Army has recognized that in order to meet the skill requirements for PM's, contracting officers, and key acquisition staff personnel, some of these officers should be allowed to enter in to these functional areas early in their career and remain there on a permanent basis. I am a strong supporter of the current Army study on officer personnel managment that recognizes this need and the Army is phasing into repetitive assignments in research and development and procurement over the ensuing years.

The research, development and acquisition (RDA) management functional area is available to all commissioned officers who possess academic degrees related to engineering, physical science, or business. Officers are designated at the grade of captain and there are currently 2,611 commissioned officers holding this functional area. The RDA functional area encompasses the multi-disciplined functions of research, development and acquisition management involved in the U.S. Army materiel acquisition process. Typical RDA officer duties include: managing and coordinating the efforts of government and industrial participants in the research, development, test and evaluation of materiel and non-materiel items; management of national missile ranges; and command of our R&D centers. Formal training supporting the RDA functional area includes advanced civil schooling and military schools such as the materiel acquisition management course, contract management, cost analysis for decision making, and the Program Management Course. The RDA functional area is one of the fundamental building blocks leading to competitively selected, specialized training for officers displaying potential for key acquisition management assignments.

As to the procurement functional area, there are currently 500 validated procurement officer positions with 1200 Army procurement officers available to fill them. The career path for military procurement officers is considered among the best in the Army. Normally, an officer first will be exposed to procurement in year 6 to year 8 of his career. By this time, he has learned his basic leadership and management skills, understands the Army's user perspective, and has some commodity experience. From that time forward, the officer will follow a dual or sequential track as previously described. At the grade of lieutenant colonel there are currently 28 command positions which are available to the most qualified procurement officers. As a colonel, 28 additional commands are available to the most qualified procurement officers. This represents a significant increase since 1981. Additionally, there are now several general officer positions which have been designated as procurement positions. The recent brigadier general promotion board selected 3 senior procurement colonels to be promoted to general officer positions. The combination of the several command positions available and the opportunity to be promoted to general officer provide an excellent career path for procurement officers. As a result, we expect to attract many high quality junior officers into the procurement career field.

The military procurement career field offers outstanding training opportunities in the Army. Not only are excellent military school courses available, but also there

are approximately 230 certified Army educational requirements board positions which result in about 15 officers attending graduate school on an annual basis. The resultant masters degrees are normally in contract and acquisition management. Also, we have expanded our Training With Industry (TWI) Program for procurement officers which I will discuss later.

In recognition of the fact that today's technology, system complexity and rising labor and production costs, make it vital to have personnel carefully trained and developed as top level materiel acquisition and logistic managers, the Army initiated a new program to develop officers in defense materiel acquisition management (MAM). MAM pulls together, for the first time, all of the functions involved in materiel acquisition into one career program. Early on, it develops commissioned officers with a broad multidisciplinary level of managerial expertise specifically related to the total integrated acquisition process.

Only applicants with the prescribed academic credentials are accepted, and they enter at approximately the sixth year of service. Selected officers are assigned acquisition management responsibilities at the grades of captain and major, after attendance at an entry-level MAM course at the Army Logistics Management Center. Thus far, 240 officers have successfully completed this entry-level course. Officers must complete two MAM assignments and the PM course at the defense systems management college by their 15th year of service. The best qualified officers are then certified as materiel acquisition managers by the MAM certification board coincidental with promotion to lieutenant colonel. This pool of officers certified as materiel acquisition managers are groomed for acquisition management assignments, with target assignments in positions of high responsibility, such as assistant project managers, product managers, and the Army staff. Thus, the certified manager phase begins the 16th year of active commissioned service and lasts throughout the remainder of an officer's career.

Another step taken to enhance acquisition skills among our RDA, MAM, and procurement and production officers is our Training With Industry (TWI) Program. This program provides training in industrial procedures and practices not available through military service schools or civilian educational institutions, and provides officers with vital knowledge, experience and perspective in management and operational techniques of a specified industry, with special emphasis on procurement management.

A recent analysis of TWI needs resulted in the identification of 153 procurement and production positions and 55 research and development positions within AMC and the Defense Logistics Agency. Based on these identified requirements, AMC has increased its annual TWI officer participation to 30 P&P officers and 10 R&D officers, beginning in 1983 and continuing through the 1988 training years. In order to accommodate the program's expansion, the number of participating companies was increased by over 60 percent, adding to an already impressive list of dynamic companies which not only have an outstanding capacity to train, but have programs which positively influence Army materiel acquisition and readiness.

The Army's Civilian Procurement Career Program differs from the military in that it is part of a DOD-wide program under the auspices of the Secretary of Defense. The program entails mandatory training at the entry, mid and senior levels. The services jointly participate in career program development and the Army plays an active role. To satisfy mandatory training requirements, DOD has established college equivalent courses at several activities such as the Army Logistics Management Center, Fort Lee, VA; The Air Force Institute of Technology, Wright Patterson Air Force Base; and the Army Management Engineering Training Activity at Rock Island, Ill.

The Army's civilian career procurement workforce numbers about 6000. Of this number, about 4200 are assigned to AMC. In addition to career personnel, there are over 3000 people in the purchasing agent/procurement clerk series. Of this number, about 1400 are assigned to AMC. Over 4200 Army procurement personnel attended formal courses of instruction in fiscal year 1984. This formal training, coupled with practical on-the-job experience provides for continuing development of our civilian procurement career workforce.

The AMC Procurement Career Intern Program serves as the primary intake means to the procurement workforce. Individuals with outstanding potential are competitively selected and are afforded priority consideration for procurement training in DOD's training facilities. They also receive a wide variety of on-the-job training assignments in all areas of procurement. Entry level is grade GS–5 with promotion opportunities to the GS–7 and GS–9 levels, subject to satisfactory course completion and on-the-job performance. Following completion of the 3 year intern program, individuals must compete for positions at grade levels beyond GS–9. Our cur-

rent intern intake is 150 per year and we have requested that number for each of the next 5 years. With respect to attracting, selecting, and retaining professionals in the procurement career field, the Army needs and as a participant on the OSD Task Force 6 Subcommittee, has requested a waiver to schedule B hiring restrictions from the Office of Personnel Management. We understand that OPM is favorably considering this request.

Major Army initiatives to improve the management of procurement careerists have been undertaken. These include: implementation of new position classification standards; increased emphasis on management of our intern program; expanded training capabilities through such methods as university course equivalency and the use of on-site and other alternative instruction modes (e.g, satellite education network); reestablishment of a senior level procurement career management board; and development of a five year plan to institutionalize further improvements to the program.

Of approximately 20,000 engineer and scientist (non-construction) Army careerists, about 13,700 are assigned to AMC. These employees support the research, development and acquisition process in such disciplines as engineering, physical sciences, mathematics, and biological and social sciences. AMC manages two types of intern programs for training and developing our engineer and scientist careerists. The first is the Intern Training Program at Red River Army Depot which graduates about 90 interns annually. This program has recently been approved for expansion from one year to eighteen months, and covers the engineering disciplines of maintenance, quality, and product/production. The second is our RDTE Intern Program at each of AMC's Laboratories. About 270 spaces are devoted to this program for development and training of individuals through on-the-job experience, supplemented by formal training courses. Both programs are working well, and together, contribute substantially to the fill of AMC's scientist and engineering positions.

A civilian counterpart to the Military MAM Program was initiated in 1983 to improve logistics, acquisition, and procurement management throughout the Army. This program evolved from a merger of the Army's Logistics Capstone Program, designed to train and develop civilians in two or more logistic functions, and AMC's Civilian Materiel Acquisition Management Program that was developed for acquisition and logistic managers in the AMC community. LogAMP provides for the competitive selection of high-potential logistics and acquisition employees in general merit and general schudule grades (GM/GS) 13 to 15. Through a blending of formal training and job assignments, successful participants can become qualified for positions at the senior executive service (SES) level where the logistics and acquisition tracks are merged. Personnel are prepared to enter the competitive development phase of LogAMP through enhanced interfunctional training and development assignments within the traditional logistics and acquisition-related programs, beginning at the intern level. Currently, 192 employees have been competitively selected for the LogAMP Program. Additionally, over 300 positions have been identified and designated within Army as key logistics and acquisition positions at the GS–14, 15 and SES levels for LogAMP managers. Although still in its infancy, LogAMP is already considered a model career program for developing civilian logistics, acquisition and procurement managers. The pinnacle of Military RDA, Procurement, Logistics, and MAM Programs and the civilian counterpart LogAMP Program is assignment to program or project management offices where there are a total of 1,071 military positions and 4,748 civilian positions. It has been considered preferable to fill these positions with military officers who possess a breadth of experience in the military arena. This enables a better understanding by the PM of field Army problems and provides for a meaningful and constructive dialogue with military officers in the military requirements business. Thus, the combination of a military manager, supported by a competent project management staff (composed primarily of civilian advisors and assistants), constitutes the ideal structure. We continue to support this premise; however, we are exploring the ramifications of appointing civilian PM's for those "one of a kind" technically complex programs which, by their nature, may lend themselves to management by a civilian having specialized knowledge of the technology involved and proven managerial experience.

Colonel level PM's are centrally selected by a HQDA General Officer Selection Board. Important selection criteria include broad based, acquisition, procurement and/or logistics experience; demonstrated leadership and managerial skills; and related baccalaureate/advanced degrees in the disciplines of engineering, physical science, or business. Further, eligibility is limited to those colonels or promotable lieutenant colonels who have 4 or more years remaining service; are members of the Materiel Acquisition Management (MAM) Program; hold the research and development functional area; or who request consideration before the board. As a result of

a recent decision by the Army Vice Chief of Staff, we are now requiring that each PM selectee who has not attended the 20 week program management course offered by DSMC, must do so before assuming the PM position.

The establishment and fill of top-level civilian executive positions is accomplished through the senior executive service, or SES, personnel system. Establishment of SES positions depend on the scope of management responsibilities, relative importance of programs managed, and availability of authorizations from the Office of Personnel Management to support them. The fact that Army has only 366 authorizations to apply against over 400 requirements, forces regular reviews of how well these authorizations are being utilized. To give you a feel for just how important supporting procurement programs is to the Army, AMC has approximately 40 percent of the Army's 366 SES authorizations. As to the distribution of AMC's 146 approved positions by duty function, over 80 percent are directly involved in the development, acquisition, support, and procurement of weapon systems. Although within AMC there are only seven SES-level procurement managers, they are a significant part of the larger civilian/military team of procurement managers that oversee every facet of AMC's RDA and logistics mission.

In response to the committee's concern relative to qualifications of civilian and military contracting officers, be advised that they are selected from within the military and civilian procurement workforce. Because of the unique prerequisites for contracting officer positions, we select only those individuals with well rounded experience and prescribed training, positive demonstrated business ability, and a record of outstanding performance.

With regard to the committee's proposals for improving the quality of the defense acquisition workforce, I am generally in agreement with most of the points. Concur:

That 4 years of weapon systems acquisition experience should be a prerequisite to PM appointments;

With an annual SecDef report to Congress covering goals, plans, and progress for improving the professionalism of the acquisition workforce;

With 4 year minimum duty tour for major program PM's;

And, in establishing requirement for a weapon acquisition career program in the military services. Our MAM Program currently accomplishes this in the Army.

In regard to the proposed criteria for promotion to brigadier general positions within the services' materiel commands, the Army shares your concern that officers in the materiel acquisition field should receive recognition for their accomplishments. Last year we promoted three colonels to general officer, who had served primarily as PM's. I expect this trend to continue in the future. I do not believe, however, we should approach our appointments of our general officers by using a "cookie cutter" approach. Doing so may not allow the proper balance of different experiences desired in these positions such as acquisition, logistical, and user. Certainly solid materiel acquisition skills and experience are required for many general officer positions, but the degree and mix will vary depending on the nature of position responsibilities, as well as the talents of other senior executives in the organization. This concept requires us to think in terms of "functions" when dealing with general officers and general officer positions. We do not want to lose that talented individual who may not fit the mold!

In closing, I would summarize by saying that the Army and AMC have aggressive programs in place to ensure a continuing high level of both military and civilian mangerial excellence throughout the entire spectrum of the acquisition process. In keeping with the President's direction, as contained in Executive Order 12352, the Defense Contracting Acquisition Career Management Board convened a special task group (known as Task Group 6) to implement requirements of the executive order. The task force results are currently being staffed within the military services prior to final implementation. This increased career management emphasis is expected to improve the professionalism of our procurement workforce. However, we are not sitting on our hands waiting for someone to tell us what needs improvement. We are taking our own initiatives to ensure that we are prepared to meet the challenges of the ever changing acquisition environment and our commitment to provide our soldiers with high quality equipment when they need it.

Senator QUAYLE. Thank you, General.

Admiral White?

STATEMENT OF ADM. STEVEN A. WHITE, U.S. NAVY, CHIEF OF NAVAL MATERIAL

Admiral WHITE. Mr. Chairman and distinguished members, I am Adm. Steve White.

As the Chief of Naval Material, my responsibilities rest principally with the Navy's Acquisition and Material Management Programs.

Therefore, the important work this committee has undertaken and your willingness to work with the service to improve the manner in which we conduct our business are warmly endorsed by the Navy and personally appreciated by me.

I welcome the opportunity to be here today.

This subcommittee is interested in our business. You have shown that interest through your study and demonstrated knowledge of the acquisition and management challenges which face us.

Others who are less knowledgeable than yourselves sometimes cloud the issues by dealing with perceptions instead of facts. So it is a pleasure to discuss this important subject with a knowledgeable group, such as you, and a program which is very important to the Navy's Material Management Programs.

I have submitted a detailed statement for the record and now, with your permission, I would like to make some brief remarks to summarize our position on the subject.

Senator QUAYLE. Your full statement will be placed in the record.

Please proceed.

Admiral WHITE. I am very proud of the Navy's accomplishments in the last few years.

The Navy is in the midst of a major buildup, as you know, to a 600-ship force structure. We will be building approximately 24 ships per year, and we will be acquiring the accompanying aircraft, weapons systems, equipment, and parts.

Under the leadership of the Secretary of the Navy and the Chief of Naval Operations, we have been pursuing a business strategy of insisting on high quality, reliable hardware at reasonable prices. We are using the marketplace force of competition as an effective tool to achieve lower costs, quality products, and an expanded industrial base.

The savings we have seen have been impressive and confirm our commitment to increased competition in procurement.

For example, the increase in the dollars of contracts competitively awarded: Only 2 years ago, it was 27 percent; this fiscal year it is 45 percent. In spare parts competition, we have gone from 16 percent a few years ago to 40 percent presently. In the same time space we increased competition in shipbuilding from 15.7 percent to 84 percent.

We have also tried to protect the taxpayers' interest by limiting our exposure to cost growth through fixed price contracts in major programs. We are using now fixed price contracts to contain costs in all of our new Construction Ship Programs.

We continue to place heavy emphasis on maintaining the quality of products that we will accept for Navy use. We are insisting on quality on the shop floor of defense plants, and we have been in-

sisting that taxpayers get what has been paid for. I believe our actions in these areas clearly speak for themselves.

We also believe that small business can and does play an important role. For example, in the past year, $6.1 billion went to small business. That is the highest ever in Navy history. That is a 34-percent increase over the prior year.

I know that you have been carefully measuring the strides that we have been making in the past years, and there is a reason why I mentioned a few of them at the outset. This is because these accomplishments, as well as the success of our future efforts, are entirely dependent on the quality of the military and civilian managers who oversee them.

You are interested in promoting the best possible, professional career paths for our top material managers. You recognize that the Navy cannot optimize program or business management without people who are properly selected, educated, experienced, and promoted.

I now would like to talk briefly about some of the programs we are pursuing in the Navy to take care of our acquisition personnel.

We are doing many things to develop and train Naval officers and civilian workers in our acquisition fields. We believe that the Navy has an excellent program manager system. It is formalized and well documented.

Our system is not perfect, and we are constantly making improvements. We have had in existence for some time our Weapons System Acquisition Manager Program, or WSAM. In fact, it is the oldest program in the Department of Defense.

We select officers into the program using special selection boards. We eduate them, we train them, and we give them experience. When they are ready, they go through another selection board process before they can be designated as fully qualified, proven, subspecialists.

Only at that point are they even eligible to be chosen as a major program manager.

All of our incumbent officers serving as major program managers came through this weapons system acquisition management, or WSAM process.

Our program managers are required to serve a minimum of 4 years. Our major program managers are assigned both a formally qualified deputy for business and finance and a similar, well-qualified contracting officer. The specialists in both of these areas are key for our acquisition structure.

The officers who serve in this capacity are principally supply corps officers.

They enter the system to become business and financial managers as junior officers. They first serve in established training billets in program offices under experienced business and finance managers.

While they are receiving this on-the-job training, they are periodically released to attend mandatory formal training courses. Based on their performance and when they have completed all training, both on-the-job and school—and that takes 2 to 3 years—we then qualify them as business and finance managers.

Our program for military contracting officers is similarly structured. These are supply corps officers who apply to be what we call NACO's, Navy Acquisition Contracting Officers.

They are carefully selected as trainees, assigned to a contracting officer, attend mandatory courses, and, when their training is complete, they are then certified formally as Navy Acquisition Contracting Officers.

We have about 33 of these officers in the pipeline at any one time.

We have similar programs for civilians who work in the acquisition business.

I would like to point out some differences.

We are expanding the use of civilian program managers. Presently, they are assigned mainly to the smaller programs. In past years, we usually employed our civilians as specialists and in technical assignments. We are increasing their use in general management that will provide more appropriately educated and experienced civilians to be qualified as major program managers.

For civilians in the category of business and financial managers, the same system that we use for training, qualification, and selection for naval officers applies to the civilians as well.

Civilian contracting officers, likewise, have a formal training program very similar to that for our naval officers. The major difference is in the entry procedures. The source of our future contracting officers for civilian career service is our intern program. This program takes recent college graduates into the Navy as schedule B, temporary, employees, provides on-the-job training, mandatory courses, and, when they are qualified, promotes them to the appropriate grade as permanent employees.

I believe that you are sensitive to the problems schedule B creates for us.

In summary, the Navy, we feel, is successfully building up our force levels, maintaining a high state of readiness. We think that insistence on quality of our acquisition managers is paying off.

If we are to maintain this forward momentum, we must do the best possible job of selecting, training, and advancing our people.

Our programs are doing a good job in that regard, but further improvements and new ideas must continue to be developed.

By way of example, the Secretary of the Navy and the Chief of Naval Operations are close to final approval and implementation of a material professional program. This program will provide for rigorous selection of operationally experienced, at-sea volunteers in both the line and staff who will, thereafter, be assigned to billets reserved exclusively for these experts in the acquisition and business fields.

I am satisfied with the recent progress in our people programs and I am particularly pleased with the increased number of people entering each of these programs, the added care exercised in the selection process at every level of responsibility as well as the addition of new education opportunities.

This concludes my oral statment.

Again, I support, very much support, the work your subcommittee has undertaken. I will be pleased to answer any questions you may have.

[The prepared statement of Admiral White follows:]

PREPARED STATEMENT OF ADM. S.A. WHITE, USN, CHIEF OF NAVAL MATERIAL

Mr. Chairman and distinguished members of the Subcommittee, it is my privilege to appear before you to provide an overview of the Navy's military and civilian procurement and acquisition workforce.

The Naval Material Command is responsible for the buying of nearly all of the Navy's requirements. Last year the Navy had 3.7 million contract actions, and was responsible for over 50 billion dollars of expenditures. An element most vital to the procurement process is the preparation, training, and support of the personnel that man and manage the Navy's procurement systems.

Of the 240,000 employees in the Naval Material Command, some 170,000 are involved with logistics at the various shipyards, naval air rework facilities, and supply centers; another 43,000 are in our laboratories and test and evaluation centers. We have 3,750 civilian procurement specialists; and another 1,303 civilians are involved in procurement assistance roles; another 901 military officers are involved in acquisition and program management; and another 46 personnel serve as major program managers. Since both military and civilian personnel are involved in these areas, and because of this mix, I will be discussing our career paths for both.

PROGRAM MANAGERS

The Weapons System Acquisition Management (WSAM) program is our primary vehicle to develop senior acquisition personnel, including program managers.

As the committee has expressed concern that there appears to be no formal qualifications for program managers, let me address these concerns by describing our WSAM program, which is the source for our incumbent program managers. The WSAM program was instituted in 1975 in response to DoD Directive 5000.23. It is the oldest acquisition personnel program in DoD and has worked very well. We are continuously improving this program, which I will address in a moment. Presently, there are 2,771 naval officers who hold one of two designations: Proven Manager or Manager Selectee. These officers are Board selected based on three specific, formal criteria:

1. Graduate education in a technical or business discipline, successful completion of Nuclear Power Training, Test Pilot Training, Industrial College of the Armed Forces, or Defense Systems Management College.

2. Experience. Selectees have all completed at least one tour or two years in an acquisition or acquisition-related billet. Proven Managers must have completed a minimum of four years or two tours in acquisition billets.

3. As with all selection boards, performance, especially in acquisition billets, counts very heavily. Because of this, WSAM designated officer promotion rates have continuously surpassed all Navy rates.

The Selection Board that chooses these officers is composed of an experienced Material Command flag officer as President and twelve Captains who have many, many years of acquisition experience. Each member realizes that the officers chosen by this Board may very well wind up working in the program they manage, so there is an automatic motivating factor to select only the best. Designation as a Manager Selectee usually occurs early in an officer's career, at the Lieutenant Commander level, but a few exceptional officers are selected at the Lieutenant level. Designation as a Proven Manager is normally at the Commander or Captain grade.

WSAM officers represent all specialties: Unrestricted Line with pilots, naval flight officers, surface warfare officers, and submariners; Restricted Line with its engineering duty and aeronautical engineering duty officers, intelligence, geophysics, and cryptologists; and, finally, the Staff Corps provides Supply Corps officers for Business/Financial Managers and Procurement Contracting Officers, and human factor psychologists and physiologists from the Medical Corps. All of these officer specialties play key parts in the broad scope of Navy acquisition programs.

Officer acquisition billets are divided into three categories: Proven Managers, Selectee Managers, and Training Billets. There are 269 billets playing critical roles affecting the cost, schedule, and utility of a system requiring Proven Managers. There are 632 billets which are coded such that Proven Managers are preferred, but Selectees may be assigned. Finally, there are 927 billets designated as Training Billets to ensure new blood is constantly being trained in meaningful acquisition management. All billets associated with acquisition, including the Secretary's and CNO's staffs on down to the field activities, are individually reviewed annually for accuracy in their coding, a process that is now ongoing—roughly some 7,000 billets are examined to ensure that every acquisition-related billet is coded.

Close control in the officer assignment process is maintained to ensure use of this special group of officers so that acquisition billets have acquisition managers assigned. For a WSAM designated officer to be assigned to a non-WSAM billet, a flag officer in the Naval Military Personnel Command must approve a waiver. Career paths for these officers are delineated in the Officer Career Guidebook, available on all ships and stations throughout the world. For seagoing officers, operational tours are intermixed with acquisition tours.

The Navy has approximately 46 key acquisition programs, managed by Navy, Marine, and Air Force officers and civilians. Twenty of these are major, as defined in the DoD Directive 5000 series. Billets for all 46 acquisition programs are filled by qualified Weapons System Acquisition Managers; these billets have been designated by the Chief of Naval Operations as equivalent to major shore command, and the incumbents are selected by the same selection boards that choose the officers for major commands ashore and at sea. These incumbents wear the shore command distinguishing device. The program managers for these programs were selected from a group of qualified candidates who were selected by these boards in a rigorous process that ensures high standards. This process looks at the background, education, experience, training, and performance of the candidates and may include interviews. The best-qualified officer or civilian from those available is chosen by the appropriate Systems Command Commander, and approved by the Chief of Naval Material. These officers serve as Major Program Managers for a minimum of four years, which has been Navy policy since the Seventies.

To further bolster and enhance our acquisition personnel corps, three new initiatives have been undertaken.

The first one is to send more officers going to program offices to the Defense Systems Management College, en route to the new assignment. In the past two years, we have doubled the number of officers sent to the Defense Systems Management College, and now 60 percent of our Program Managers are graduates. Funding is in the 1986 budget to allow us to achieve our goal of 100 percent attendance by Program Managers.

Second, we have worked with the Naval Postgraduate School to institute a special graduate degree program in Systems Acquisition Management. Our thrust is: educate an officer in a rigorous 15-month curriculum, then immediately have him ordered to a program office where he can attain a proven subspecialty in management, and at the same time complete the minimum standards for WSAM designation. This will allow junior officers to obtain a master's degree, experience, and designation, within a three-year period.

Third, a new program is being considered called the Materiel Professional. This program was initiated by the Secretary of the Navy and the Chief of Naval Operations, to bring the experience of front-running senior officers, commanders and above, into both the acquisition and material support functions. As presently envisioned, the Materiel Professional Program will have the existing WSAM process as one of its sources of supply. From the time these officers entered the program, they would remain in these Materiel Professional billets. A career path leading to flag officer rank has been designed for this group; in fact, some 70 to 80 flag officer billets have tentatively been identified to be filled only by Materiel Professional designated officers.

Additionally, to strengthen Program Management, the Navy recognized a need for a focal point for all business and financial matters within the program offices. In 1974, the Chief of Naval Material established the Business/Financial Manager (B/FM) program, which created a deputy/assistant program manager position for all major programs. The B/FM serves as the primary advisor to the program manager and, with the program manager, is responsible for acquisition strategy development; cost estimating and budget formulation and justification; financial system development, control and reporting; contract planning and coordination of requirements with the contracting officer; and contractor financial analysis and review of contractor performance and progress.

Supply Corps officers possessing strong backgrounds and education in business administration, finance, and contracting are assigned to these positions. These officers have MBA's in acquisition or financial management, and experience in either financial management or contracting. (Often they have had previous tours in both areas.) We currently have 29 Supply Corps LCDR's and CDR's assigned to B/FM positions, the balance being filled by civilians.

A Business/Financial Management Training (B/FMT) Program has been established to ensure a continuing flow of qualified officers for future requirements. The B/FMT program is controlled by the Naval Material Command and combines formal training with on-the-job experience. We have eight training billets estab-

lished in various program offices withing the Systems Commmands. Candidates are carefully selected and progress is monitored to ensure that all required training is accomplished over the two-year tour. Formal training courses required include various business and technical management courses at the Defense Systems Management College (DSMC) at Fort Belvoir, and courses at the Navy Acquisition/Logistics Management Center (NA/LMC) at Anacostia. There are more than 20 weeks of required courses and an additonal 20 weeks of optional courses. Business and Finance trainees can expect a subsequent assignment to a master's degree program in either contracting or financial management and follow-on tours as a BFM and in either contract or financial management positions.

CONTRACTING OFFICERS

The Supply Corps, which provides virtually all of the Navy's military contracting specialists, has a career program to develop officers' contracting skills, called the Navy Acquisition Contracting Officer (NACO) Program, which dates from 1972. Sixteen junior officers graduate from this program each year and are assigned to activities which are involved in all aspects of Navy contracting, from spare-parts buying to the acquisition of R&D and major weapons systems. Control of the 33 training billets and oversight of this program are maintained by the Naval Material Command Headquarters. Competition for entry into the program is keen, with only one of eight applicants being selected. Training is provided through a combination of formal classroom courses and on-the-job practical experience. The four-week Management of Defense Acquisition Contracts (Basic) Course at the U.S. Army Logistics Management Center (ALMC) at Fort Lee is a mandatory requirement for matriculation in the program. A special one-month Business Resources Management Course (BRMC) is conducted annually by NAVMAT at the Colgate Darden Graduate School of Business at the University of Virginia. Once the NACO program has been successfully completed, an officer can expect two or three more tours in contracting, and to attend a graduate degree program early in his career. We currently have 135 graduates of this program on active duty.

CIVILIAN WORKFORCE

The bulk of Navy procurement is done by its civilian workforce, which is comprised of some 3,750 procurement specialists. These negotiators, analysts, and contracting officers are the backbone of the Navy's contracting process. Additionally, there are some 3,000 others in areas such as cost and pricing and property administration. Recognizing the need for a program to ensure an availability of professional personnel to man the procurement function, the Navy in 1973 established the Navy Civilian Contracting Intern Program, its objective being to recruit, develop, train, and retain a cadre of professional contracting personnel to manage the Navy's existing and future contracting functions.

In the years following, however, the problem of an uneven age distribution among personnel in the procurement workforce throughout the Federal government was clearly identified and documented by studies conducted by Congress and the General Accounting Office, as well as the President's Blue Ribbon Panel and the Commission on Government Procurement. Most recently, an analysis of the *Federal* procurement workforce indicated that:

(1) Two contracting specialists out of every five now employed have less than four years' experience;

(2) By 1993, most contract specialists now employed will have left the GS-1102 series; and

(3) The majority of 1993's contract specialists have not yet been hired.

These findings lent greater credence to the need for the training program the Navy had already established. Further, they clearly indicated that our recruiting and training efforts now underway will in large part determine the shape and makeup of our procurement workforce in the coming decades. Let me describe our intern program and the opportunities it offers.

There are three different recruiting vehicles permitted by the Office of Personnel Management through which Navy contracting interns may be selected and brought into the program, namely: (1) on-campus recruiting; (2) merit promotion; and (3) upward mobility. Beginning in 1977, the program has graduated approximately 60 people per year, and graduates are now spread throughout the Federal government in contracting positions. There are 180 training billets spread over some 55 Navy activities, and the average intern, typically entering at the GS-5/7 level with target contract journeymen grades of GS-9 through GS-12, completes the program in two to three years.

In the area of education, Navy civilian procurement personnel are required to complete the same education and training that is required for military procurement personnel. Since both military and civilian personnel occupy key procurement management positions throughout the Navy, we believe that it is imperative to mandate that both communities, civilian and military, complete the requisite educational experiences.

Probably our most significant problem in recruiting and training civilian procurement specialists is conversion of our interns to career status from schedule "B" appointments. The elimination of the PACE exam forces us to use schedule "B" appointments (non-career) to acquire interns. This allows us to screen candidates and hire directly from college. We are getting good selectees and have about 300 of them in our programs at present.

Our problem is that we cannot promote them beyond the GS-7 level without conversion to career status. Thus, we have top people in whom we have invested development time and dollars, but we have no assurance that we can convert them to career status or promote them. To convert, we must go to the Office of Personnel Management (OPM) for certification, which subjects interns to the mid-level examination and regional registers, with all the attendant complications and uncertainties. We are working with OPM directly to allow conversion after two years based on successful performance and a special examination specifically designed for the 1102 series—Schedule B personnel. This appears to us to be the best form of competence-based examination. Once we achieve conversion, we have effective development programs within the Navy for our procurement specialists.

Another initiative, with which the Subcommittee is familiar, is Task Group Six, implementing Executive Order 12352. This Inter-Agency Task Group was chaired by one of our flag officers, Rear Admiral Joseph Sansone, USN, who serves as Deputy Chief of Naval Material for Contracts and Business Management. At present, the Navy is implementing the first module developed by Task Group Six, which covers the development of an agency-wide Procurement Career Management Program, and which includes the establishment of a Navy Procurement Career Management Board comprised of senior Navy and Marine Corps procurement specialists. The responsibilities of this Board, and the Navy program, will be to look at what modifications or improvements to existing Navy programs are appropriate to implement the spirit as well as the specifics of Task Group Six recommendations. These include the following modules: the development of a Contracting Officer Selection and Appointment System, Recruitment and Selection, Procurement Intern Programs, Career Development and Training, Education, Performance Appraisal and Award, Classification and Position Management, Procurement Research, and the development of a Career Management Program for Small Purchase Personnel.

Now, let me comment on initiatives that the Subcommittee has indicated it is considering. These are:

First—that each military Department establish minimum regulations governing requirements in education, training, and prior work experience for program managers.

The establishment of minimum requirements would agree in nearly all respects with current Navy practices and procedures for the selection and training of our major program managers, and could be readily supported.

Secondly—that each military Department establish minimum requirements in education, training, and prior work experience for officers selected for general officer or flag rank in Material Commands.

In this area, current and planned Navy procedures are in consonance with such standards. Currently, special consideration for promotion of program managers to flag rank has been a part of the official guidance to the last three Navy Flag Selection Boards. Similarly, such guidance is also given to Captain Selection Boards.

Additionally, our new Navy initiative, the Materiel Professional Program, will select highly capable mid-level officers for a career in acquisition. It provides for 70 to 80 flag billets that will be reserved for Materiel Professional officers.

Two further initiatives would require annual reports from the Secretary of Defense to Congress on various aspects of the acquisition force.

The Navy could support the Secretary of Defense if such reports were to be required. However, I believe that this information would be readily available to the Congress on a continuing basis during the routine dialogue which occurs between the military Departments and the oversight committees, rather than creating an additional and time-consuming reporting requirement for both of our staffs.

Lastly—that each service create a career specialty for acquisition managers.

This initiative would be satisfied in large measure by the Materiel Professional Program, which is presently undergoing final review by the Chief of Naval Oper-

ations and the Secretary of the Navy prior to implementation. The initiative is presently supported by current acquisition specialties, the WSAM program, and our Supply Corps specialists who serve as contracting officers and business managers. All provide career paths, but they permit these officers to bring operational experience obtained as junior officers to acquisition assignments. I believe that a career path that permits the proper mix of Navy operational and acquisition experience early in an officer's service will enhance our cadre of senior dedicated acquisition professionals.

Finally, I would recommend that any legislation on the subject emphasize the intent and general desires of the Congress. It would be a mistake to deprive the Service Secretaries of the flexibility they need to tailor their programs in terms of education, experience, and grade levels.

In summary, Mr. Chairman, I believe that the Navy has a very fine program for the recruitment, selection, training, and retention of its military Program Managers and Contracting Officers. As I noted, the Weapon Systems Acquisition Management Program carefully selects, trains, and provides a designated career path for its Program Managers who direct the major acquisition programs.

Our new program, the Materiel Professional, may further enhance our selection process and provide these senior professionals with excellent opportunity to achieve flag rank. It will bring into the acquisition process even more capable officer personnel.

The Navy Supply Corps provides the source for nearly all of our military contracting specialists and those officers designated as Business/Financial Managers. Our Headquarters, the Naval Material Command, maintains oversight and control of the training and selection of personnel who become the Navy's contracting and business specialists.

Finally, in the civilian workforce, those who provide much of the middle management for the acquisition process, our problem is that of acquiring and training adequate numbers of personnel to replace the aging workforce now retiring in greater numbers. Directly related are the difficulties in recruitment and promotion of young procurement interns caused by the elimination of the PACE examination.

This concludes my statement, and I thank you for your support of our acquisition workforce programs. I will be pleased to answer any questions you may have.

Senator QUAYLE. Thank you, Admiral White.

General Skantze.

STATEMENT OF GEN. LAWRENCE A. SKANTZE, COMMANDER, HEADQUARTERS, AIR FORCE SYSTEMS COMMAND

General SKANTZE. Mr. Chairman and members of the subcommittee, I am pleased to appear here today to discuss the Air Force systems acquisition work force.

I have prepared a statement and, with your permission, will present it now.

As you know, Air Force Systems Command is responsible for the research, development, test, evaluation, and acquisition of fully supported weapon systems. Given the magnitude of our acquisition job and our financial responsibilities, improving the acquisition process is an important and continuing commitment.

Today, you in Congress are concerned with improving the quality of our acquisition work force by increasing standards and training, and by providing incentives and rewards for qualified acquisition personnel.

I agree with the intent of these objectives. I would like to share with you the approach employed by Air Force Systems Command to ensure the education, training, and experience levels of our acquisition personnel are maintained at a consistently high level.

I would also like to discuss how we ensure these highly professional work force people are provided with effective management and leadership and, subsequently, melded into a top-flight acquisition team.

The Air Force has, for many years, relied on a team concept for the acquisition of weapon systems. As the leader of that team, the program manager is often the most visible member and is a critical element in the success of the program.

But, the program manager is not the only element. A program office team is made up of specialists in program management, testing, contracting, quality assurance, logistics, manufacturing, and many other areas, who work in concert to ensure each acquisition is effectively accomplished.

The Systems Command F-16 Program Office is a good example of a very successful acquisition team. This office is comprised of approximately 300 people, with roughly 75 engineers, 30 testers, 25 logisticians, and 40 contracting specialists blended together in a mix of military and civilian professionals who manage a program which has delivered 1,300 F-16 aircraft to the U.S. Air Force and our allies overseas, and has 12 FMS cases, in aggregate totaling an amount of almost $70 billion in total acquisitions.

The blend of experienced and well-trained personnel for such a program forms an office that effectively supports the leader—the program manager.

While all the disciplines represented in a program office are important, I would like to specifically address two areas that I believe are representative of the effectiveness of our approach to training our acquisition work force: program manager development and contracting officer development.

Let us first look at the typical development of an Air Force program manager.

This individual will have graduated from college with a minimum of a bachelor's degree in engineering, computer science, or pure science. Upon entering the Air Force, an officer targeted as a future program manager will have an operational tour; that is, an assignment with an operational unit dealing with an Air Force weapon system in an operating field environment.

If business management training is lacking, the individual may obtain such education preceding, or in conjunction with, the next assignment, perhaps gaining a master's degree through the Air Force Institute of Technology.

The next assignment would typically be to an Air Force Systems Command field organization for a tour at a laboratory, test center, or program office.

At this point, the officer would now be entering mid-career. Over the next 12 years, the individual will complete two more assignments at program offices, gaining experience in program control or engineering and/or project management.

During this period, attendance at a special program management course, either through the Air Force Institute of Technology or the Defense Systems Management College, will occur.

An assignment to Headquarters USAF or Headquarters Air Force Systems Command is then a logical follow-on tour.

Such trained and experienced officers are then in a position to be selected as program managers.

I must emphasize that education and training are not the only criteria we use to select our program managers. A good program manager must have strong leadership ability.

Obviously, with the team concept we apply to program management, a program manager will have a very diverse group of personnel to motivate. People can be schooled in leadership, but a person must actually develop this essential characteristic by gaining experience working at various levels of responsibility and in different environments, such as an operational Minuteman missile organization or in a laboratory.

So, our approach is not only to teach basic skills, but also to provide the real-life experience necessary to develop effective leaders.

As an example of the way in which this system works, I would like to discuss the career of Gen. Selectee Ronald W. Yates, currently the System Program Director for the F-16 fighter. I do this because I believe General Yates reflects the success of our approach.

After graduation from high school in Nashville, TN, in 1956, he earned a bachelor of science degree in military science from the U.S. Air Force Academy.

As a second lieutenant, Ron received pilot training and was then assigned, in 1964, as an F-102 pilot at Clark Air Base in the Philippines. While there, Ron flew 100 combat missions in Southeast Asia.

Upon his return to the United States in 1966, he was assigned as a student at the Aerospace Research Pilot Test School at Edwards Air Force Base, CA. He remained there as a test pilot and chief of the Aerospace Research Pilot Branch until December 1970. During this time, he earned a master of science degree in systems management from the University of Southern California.

From 1971 to 1973, he was assigned to Headquarters, Air Force Systems Command, as the assistant director of senior officer assignments.

From there, he was selected to attend the Defense Systems Management College. Upon graduation, he was assigned as director of development flight test for the A-10 weapon systems program office at Wright Patterson Air Force Base, OH.

Upon graduation from the Industrial College of the Armed Forces in June 1977, he was assigned to Headquarters, U.S. Air Force, as the F-16 program element monitor, Office of the Deputy Chief of Staff for Research and Development.

In March 1979, Ron returned to Wright Patterson Air Force Base where he served successively as deputy F-15 system program director, the F-15 program director, the commander of the 4950th Test Wing, and the aeronautical systems division deputy for tactical systems.

General Yates assumed his present duties in August 1983.

Because of his diverse background and proven "can-do" track record, General Yates has clearly demonstrated his ability to effectively utilize his education, his training, and his experience in a leadership role. Major General Selectee Yates is representative of the many outstanding officers and program managers which have been produced by the Air Force approach. This officer can lead because he has been there.

Another critical component of the acquisition team is the contracting officer. Recognizing the emphasis of Congress, as well as the executive branch, for professionalism in the civilian workforce,

I will specifically focus on the Air Force Program for Professional Development of the Civilian Contracting Work Force.

Historically, we have had an active, professional development program for the civilian contracting work force.

In the past, professional development of these civilians has been managed under a variety of civilian personnel and training regulations. Representative of the effectiveness of this program has been the Air Force "Copper Cap Intern Program" for civilians.

This program has provided intensive career development for those high potential employees possessing the abilities necessary to progress into highly skilled journeyman and managerial positions.

The program includes a series of planned work assignments, supplemented by formal training, usually over a period of 3 years. Since its inception in fiscal year 1973, 486 Air Force Systems Command interns have participated in the program. Right now, we have six former "Copper Cap" employees at Headquarters Air Force Systems Command, including two from the Senior Executive Service: Mrs. Darlene Druyun, who is here with me today is the principal assistant, DCS/Contracting, and Mr. Tony DeLuca, who is the command competition advocate.

While this program has resulted in a highly trained and well-motivated work force, increased workload and complexity has demanded a more systematic management of the civilian development program.

This more systematic management is reflected in the DOD civilian career program for contracting and acquisition personnel, and the new Air Force "Acquisition Civilian Career Enhancement Program." This program, currently being initiated within AFSC and Air Force wide, establishes the overall framework for contracting and manufacturing career fields.

The goal of the ACCEP program is to attract and develop and retain high quality professionals to meet current and future Air Force missions.

Under ACCEP, centralized recruitment of interns will help attract high quality college graduates recruited at the GS–5 level.

ACCEP will also train and develop existing employees with high potential. Training will be centrally managed and funded to insure all Air Force employees receive fair and equitable consideration for the various training opportunities.

In addition, these employees will be offered career broadening assignments with industry and at various Air Force locations. With the training programs, career broadening assignments, and self-development, employees will be highly competitive for referral by the DOD Acquisition Career Management System.

This will improve retention of well-qualified contracting and manufacturing personnel. We look to this program to provide us with the highly skilled and professional work force we will need to accomplish our mission in the years ahead.

As you can see from my comments, the program manager, the contracting officer, and the other professionals involved have a significant role to play in the systems acquisition process.

We demand high levels of achievement, accountability, creativity, and profe ssionalism from the individuals who serve in these vital positions. We are also working diligently to increase the expe-

rience base of all the members of the acquisition team, and to assure the best in training and education for these important members of the military and civilian work force. The future of our defense effort demands no less.

In closing, Mr. Chairman, I would like to give you a few brief statistics.

We have 33 managers in the systems acquisition report, or SAR, programs. The average experience of those 33 managers in the acquisition business is 11 years; 26 of those 33 had prior experience in program offices; 22 of the 33 were program managers before taking over their current programs.

The general officers in Air Force Systems Command who are program managers average 16 years experience.

I have 27 general officers in Air Force Systems Command; 27 out of the 27 were promoted in Air Force Systems Command, 19 out of the 27 have run at least one program and in most cases two; and 13 out of the 27 were promoted as program managers.

I think I am in the fortunate position of having an institution within the Air Force that, indeed, is a career field. I think the statistics on the General Officer Corps of 27 generals shows that these people have truly grown up in the business and provide us the depth of leadership that we need.

Thank you, sir.

Senator QUAYLE. Thank you.

Let me begin with this broad question to see if I can get any agreement.

Do you think, as a matter of policy, that we should have a dual track approach within the Armed Forces of our country, the dual track being one, the operations of the armed services, and two, the procurement and acquisition as the second path? Do you think this is a reasonable approach that we could take as a matter of policy or do you think this is something where we are going to have to mix the operations and acquisitions together and you can't really have separate career paths as far as operations and acquisition are concerned?

General Thompson, would you start that one out?

General THOMPSON. Sir, I think there is a place for both.

I think for many of our systems, and it really is system dependent, I think you would want an individual who has had operational experience and also has been in the acquisition or development side of the operation. Take a system like Tac Fire, which is for our field artillery. To really understand that system, you have to really go out and learn what it is like to be an artilleryman.

Now, there are other systems wherein the need is for sequential career development, where you stay in that particular area and you work continually, in different kinds of assignments that have to do with materiel acquisition.

Senator QUAYLE. Do you have right now, within the Department of Army a system whereby if someone enlists or someone graduates from West Point, he is told, I am sure, how he can become the commander of the brigade, so he knows how to get there, he knows the amount of time he has to put in at such and such a stop along the line, and if his card is not punched at such and such a point of his career, he knows he is not going to make O-7 or beyond? Do you

have the same kind of information and career path for acquisition for that person getting out of West Point? Can you tell him how to become O-7 by getting into acquisition and staying in acquisition and becoming a program manager and getting on?

General THOMPSON. Sir, until November 1983, we had no formal career program in the Army to do exactly what you say. We now have such a program.

We tell an individual now the following: In your sixth year, after you have had a chance to soldier for a little while, as a young captain, you are allowed to make a decision to go into materiel acquisition management, the Materiel Acquisition Management Program. When you make that determination, we send you to school at the Army Logistics Management Center; we then give you an assignment in the materiel acquisition management business; we bring you back again, probably when you are a major; and we send you to school again at the Defense Systems Management College and we give you another materiel management assignment; we may give you training with industry; we will give you other functional kinds of training; you will be getting experience as you work in either procurement or research and development; when you get to be a lieutenant colonel, we then tell you we are going to certify you now as a materiel acquisition manager; upon that certification, we will put you into more demanding jobs with increased responsibility.

We now tell people that. We now have a program to do that.

We did not have such a formal program until 1983.

Senator QUAYLE. So, you are saying to the young soldier that for the first 6 years he is going to be out in operations.

General THOMPSON. Yes, sir.

Senator QUAYLE. And then, at that time, he is going to make a decision on whether he wants to stay with operations or get into acquisition?

General THOMPSON. Yes, sir.

Senator QUAYLE. Now, if he gets into acquisition, in the chart that you just laid out, he still has some operations?

General THOMPSON. Yes, sir.

Senator QUAYLE. What kind of ratio is that? Is it 3 to 1? What is the necessity, if you are going to have someone after 6 years of soldiering say he would like to get in more to the management side, to have him have to go back out and have the operations background as well, when he already has 6 years of it?

General THOMPSON. Sir, it is a matter of level. For that first 6 years, he is a platoon leader or, at best, a company grade officer, and he is really learning the basics of his profession. We think that, as he proceeds and matures, he has to go back and rework in that area but in certain systems, not every system.

Senator QUAYLE. All right. I will come back to that.

Admiral White, do you want to take the general question of having this dual track approach?

Admiral WHITE. I would be happy to try to answer that.

First of all, Senator, you have to define what you mean by operational. If one refers to operational as being out in the fleet, then I think it is a necessity to have what you would call a dual track system. The reason for that is that many jobs in the fleet actually

are in acquisition in the broadest sense. Acquisition includes logistics and maintenance, for example.

A commanding officer of an intermediate maintenance activity, which is a semi-industrial activity, is out in the fleet, for example. Contracting officers are in the fleet. Supply officers are in the fleet. It does not mean that they are not getting experience in acquisition management. It means quite the contrary. In fact, they are getting a great deal.

Senator QUAYLE. I think maybe what we have is a definitional problem——

Admiral WHITE. Yes, that is what I am suggesting.

Senator QUAYLE [continuing]. In what we mean by acquisition management experience. Maybe we should try to come to grips with that. Do you want to try to define it?

Admiral WHITE. Well, I was defining it for purposes of this as procurement support, logistic support, and maintenance—all of the factors that enter into a weapon system.

If one looks at a weapon system today, and earlier you heard testimony about bringing it in on time and under cost, and so on, part of that is the training of the people who have to operate it, the logistics support of it. Those areas really are the achilles heel to many of our modern weapons systems. So I include all of those things.

I don't want a program manager who just knows contracts or who just can deal with industry. I want him to understand the full picture, so I define it that way.

Senator QUAYLE. So, if you would define it, then I think you would probably have a broad definition of acquisition management experience.

Admiral WHITE. Yes.

Senator QUAYLE. At what time can that person signing up for the Navy make a decision that he wants to get into acquisition, stay in acquisition, and then, when he becomes a program manager, say, of a major weapons program or a major ship construction program, how many years of experience would you like to see as a general rule and standard of operation for these program managers to have?

Admiral WHITE. Let me first say that, if I look at today's major program managers that we have, they have an average of 16 years' experience. Eight and a half years of that is specifically in the narrow definition of acquisition—that is, they have been in a program office somewhere. The other 7½ years have been in other jobs, either in logistics, or maintenance, or support—for a total of 16 years. That is pretty good. We are comfortable with that.

Now we are instituting a new program to give more mobility to those people to flag rank. The new material professional that I said the CNO and SecNav were in the last stages of approval, will set aside some 70 or 80 flag billets within the Navy that can only be filled by material professionals.

So that is kind of the key that has been missing out of this, perhaps, to provide that kind of mobility.

Senator QUAYLE. Did you say you were going to set aside 70 or 80 billets?

Admiral WHITE. Yes, 70 to 80 billets.

Senator QUAYLE. Is that O7 or above?

Admiral WHITE. That is commodore to full admiral, yes.

Senator QUAYLE. How many do you presently have of the O7 or above that are in acquisition?

Admiral WHITE. Well, we don't have the material professional, so I can't really answer that question.

Right now, within the materiel command, I have a total of 47 flag officers. Many are engineering duty officer-only, supply officers, and so forth.

What I am saying is a new concept will set aside for a particular experience of officer. He is the only one who can fill those billets, and that is the present plan.

Senator QUAYLE. Of the people who were promoted to flag officer, O7 or above, last year in the Navy, how many of them had been program managers? Do you have any idea?

Admiral WHITE. No.

I will provide that for the record.

I have 10 flag officers presently in major programs, but I would have to go back and look at last year's selection. I will do that.

Senator QUAYLE. OK.

[The information follows:]

FLAG OFFICERS IN MAJOR PROGRAMS

Three of the people in the Navy selected to flag officer last year were previously program managers. In addition, six flag officers were selected with previous acquisition experience at other than the program manager level.

Senator QUAYLE. General Skantze, do you want to take a shot at this dual track approach? What I am trying to get at is at what point in their career can we get this determination of what they are going to do?

I listened to your recitation about General Yates, and I gathered that after he was a test pilot at Edwards was when he really got into the acquisition cycle, which would be around 1970, I think, if I recall. So he was in it for about 14 or 15 years, seriously into the acquisition cycle, but he had some operational experiences before then which made him a very good, qualified candidate. But before that, I don't know where he was headed, before he made that decision, after being a test pilot at Edwards.

General SKANTZE. We have a sort of de facto dual track in this sense. We have requirements for accessions every year for so many engineers. We get these engineers in small numbers from the Air Force Academy, in large numbers from ROTC, and we give scholarships for them.

In Air Force Systems Command, I have 70 percent of the engineering billets. So automatically, anybody who is an engineer has the opportunity of spending most of his service in Air Force Systems Command.

Now, we can have engineers who will go directly to pilot training as engineers, but when they finish their normal tour in pilot training and come to a behind the line assignment, they can come in to Air Force Systems Command. I have about 600 of those people right now. They are very important in the sense of the people I want to look at how you lay out an F-16 cockpit. They are people who have been fighter pilots, or people like Ron Yates.

But, in effect, when you recognize that the Air Force acquires each year less than 40-percent rated, to fill the rated requirements, all the rest of the people who are nonrated, most of those who are engineers or MBA's, wind up with a great majority coming into my command.

So, in essence, they start off as second lieutenants in Air Force Systems Command. If they are engineers and they grow from there, with the exception of trying to establish assignments for them to go out to an operational command to experience what is involved in supporting a weapons system, they will come back. For instance, we will send people as first lieutenants or captains to Minuteman silos to be commanders, and then they will come back.

But, in effect, by virtue of having all of the billets for practically all of the engineers, a goodly number of the contracting officers, and almost all of the program managers, I have, in essence, an institution to which people can come directly when they are accessed to the Air Force and stay in that career field.

Senator QUAYLE. My time is up, though I might ask a couple of questions on the second round.

General Skantze and General Thompson, I wonder if you also might supply for the record, unless you know now, how many generals were promoted last year who had been program managers? Do you know?

General THOMPSON. Yes, sir.

Last year, the Army promoted 90 people to brigadier generals. Of that number, 11 would fall under this Materiel Acquisition Management Program that I have talked to.

Senator QUAYLE. Had they been program managers of weapons systems?

General THOMPSON. Yes, sir. I was just getting to that.

Three of them were project managers. Three of them were procurement people whose career had, for the most part, been spent in procurement; and the balance were in other things, like aviation, logistics, maintenance, missiles, and munitions.

Senator QUAYLE. But you only had three who were actually program managers?

General THOMPSON. Actually, yes, yes sir, who had been.

Senator QUAYLE. General, do you happen to know what the figure is for you?

General SKANTZE. I think we had 10 people in the Air Force who were in acquisition management. Six of them were in Air Force Systems Command and two of those were program managers.

Senator QUAYLE. Two out of how many generals total in the Air Force who were promoted?

General SKANTZE. We had about 44 or 45 promoted.

Admiral WHITE. I do recall the numbers. We had selected 30 flag officers, and 4 of them came from program management.

Senator QUAYLE. They were program managers?

Admiral WHITE. Yes, they were.

General SKANTZE. But there is one thing to keep in mind. One of the guys who was promoted in Air Force Systems Command is a contracting specialist, so he is now my Deputy Chief of Staff for Contracting. So he is as important to me as if I were getting another program manager.

Senator QUAYLE. Well, what I am trying to get at is this. As you heard the testimony from the Martin people, that program manager was a key position in that company, in that career ladder, and, by golly, if you wanted to get to the top, you had to be a program manager.

I would sort of like to institute some similar type of thinking in the Armed Forces, that by golly, to get to the top, I want to be a program manager.

General SKANTZE. The thing you need to understand is a guy can be a program manager, red hot as a junior colonel, and you may not promote him in his program manager billet, but you might promote him in his next billet, where he might be my assistant deputy chief of staff for systems.

You know, Jim Abrahamson was not promoted as the program manager for Maverick. He got promoted in his next billet, and he became the IG. Then be became the F-16 program manager as a general officer. So you have to look and recognize that all of these people growing up, who are successful program managers, are getting promoted either out of the program shop or in the next billet within the command.

Senator QUAYLE. And I think that is healthy. I think that is healthy.

Senator Bingaman.

Senator BINGAMAN. Let me just ask about all of these billets.

Don't we have too many billets?

As I see your example here, General, about Major General Yates, he obviously has had a great deal of experience, and a good deal of it in acquisition. But it strikes me that he jumped all over the place. You had him as program manager for a couple of years, then off to do something else, then back, then off. I was asking the earlier witness about accountability in the system.

If a person is not allowed to stay as program manager, or required to stay as program manager of a particular program for some period of time, how can you hold anybody accountable for anything in this program manager situation?

General SKANTZE. Well, Yates has been running the F-16 now for 3 years, and we have no plans to move him.

But let me answer your question this way.

I was the commander of Aeronautical Systems Division from 1979 to 1982. When I got out there, Yates had just taken over the F-15 program. The F-15 program, in terms of the size and magnitude, was coming down the other side. We were taking people out of there and putting them into growing programs. Yates handled that very well.

Then, when that program looked pretty stable at a low level—we were only buying 36—I needed someone who had acquisition experience who could run the test wing, and the test wing supports the whole institution out there in terms of flying new equipments and what we do.

You know, putting him over there and then, when he got promoted, bringing him back later as the deputy for tactical systems, which at that point included the A-10 and the F-15 and some other things, is not taking him from one job and he goes into the

next job and starts with a zero experience level. He has all the experience of having managed major programs.

When you move into the next program, you don't start cold.

I ran the Short-Range Attack Missile Program and got promoted to brigadier general. Then I went to the AWACS. I ran the AWACS for 4 years.

I was able to step into that job and run AWACS because I had essentially cut my teeth on the SRAM.

Senator BINGAMAN. Do you think the 4 years should be a minimum requirement? I gather the Navy has it.

General SKANTZE. We agree with that, but with just one caveat. If you find out that you have the wrong guy in the job, you ought to have the license to remove him, which we must be able to do.

Senator BINGAMAN. Do you feel you have that license now?

General SKANTZE. Absolutely.

Senator BINGAMAN. So you don't see anything that needs fixing with regard to your discretion or ability to remove whomever you want to?

General SKANTZE. No, sir; and I have removed several.

Senator BINGAMAN. OK.

Let me ask about civilians in positions of program managers.

I guess the admiral said that they were trying to do more of that in the Navy. Why are we not doing that extensively everywhere? Maybe we are. But it just strikes me that most of the skills that are needed—our previous witness testified that their best program managers have been in the service 2 or 3 years, or at least some of them have, though some of them have not, and he obviously did not feel from the industry side that there was any need to have people with an extensive military background. Why is there a need to have people with extensive military background serving as program managers on the Government side?

I would defer to any of you who would like to respond.

Admiral, did you have a comment?

Admiral WHITE. Senator, we are already trying to do that. I cannot think of a good reason why that should not be so.

You know, my command is 250,000 people, and 220,000 of those are civilians. So the preponderance of my command is civilian, and we should have more program managers. We have been working toward that goal.

Senator BINGAMAN. What percent of your program managers are civilian?

Admiral WHITE. I can give you the exact number in just 1 second.

In major programs, I have 4 out of 46. So it is a small fraction. I think I have a total of 79 in the ACAT 2, 3, and 4, out of almost 400. So, overall, if I take little programs and big programs, it is something less than 25 percent. In major programs, it is a smaller percentage than that.

The reason is that we have been putting the civilians in the smaller programs. We now want to use that as a training ground to get them into the larger programs.

For example, recently, when I looked last year for a program manager to run what we call our BOSS Program—our Buy Our Spares Smart Program—competition, breakout, and all those

things, I looked around merely for the best person, and that happened to be a civilian rather than a military officer. So I put him in that major program.

We just have to select the best people.

In the past, we have not nurtured the civilians in what I would say in the military would be a career path. We have started that in the last 2 years, specifically, a mobility program, where we take our senior civilian grades and move them to places to gain experience, so they will be someday major program managers.

Senator BINGAMAN. May I get an idea of how extensive the use of civilians is as program managers in the Air Force and Army?

General SKANTZE. As far as the Air Force goes, it is a small number. I think we have 2 or 3 out of the 33 programs I mentioned.

Part of the problem—well, I should not say "problem," but the perspective—is like this. For example, the civilian work force is not as mobile as military people are. You can move military people much more easily and much more rapidly. The civilian work force is not that mobile. A number of individuals will go. That is not to say that they would not. But some people would not move.

It is important for program managers to appreciate the full spectrum of what the military business is from an operational point of view, which has been mentioned here. The program manager has to understand the customer's requirements and where he is coming from and why he thinks the characteristics of the weapon system he needs are important, and in some cases be willing to engage in dialog with him and force some tradeoffs, and ultimately pin down that program requirement. I think our military people are more capable of doing that with the user than our civilian people are.

I also think it is very important that our military people who are going to be program managers serve a tour in Washington, DC. If they do not, they will be very much disconnected from the turbulence and complexity of the real world in which we live and that we go through out here.

So these characteristics I think are very important to bedding down a realistic, pragmatic program manager.

Senator BINGAMAN. It is hard to believe that being connected to this turbulence and whatever the other word that you used——

General SKANTZE. Complexity.

Senator BINGAMAN [continuing]. Is helpful to anybody in his career. [General laughter.]

General, perhaps you could just give me an idea of the extent of the use of civilians in the Army.

General THOMPSON. Sir, it is very simple—none, zero.

Senator BINGAMAN. Why is that?

General THOMPSON. That is a good question. That is the question that I have raised.

I have three of our systems under review right now to see why they shouldn't have a civilian project manager.

Sir, I think General Skantze gave you some very, very good reasons. There is another reason that we found, and that is that many of our civilians come to us with years of experience, but they have only had it in one very narrow operational area. Either they are in

supply, or in maintenance, or in development, and they have not really moved laterally and through different skill areas.

But it is a good question. It is one that we are examining right now, as I have said.

There are three systems that we are looking at where we think the nature of the system and the kind of technology involved lends itself to having a civilian there.

Senator BINGAMAN. Thank you.

That is all my time.

Thank you, Mr. Chairman.

Senator QUAYLE. Thank you, Senator.

Senator Glenn?

Senator GLENN. Thank you, Mr. Chairman.

Let me follow up on that last question, if I might, General.

If your civilian managers come to you and are not as capable because they have been in one narrow operational area, does not the same thing apply to the military?

General THOMPSON. No, sir.

Senator GLENN. Well, maybe I misunderstood your answer.

General THOMPSON. What I was referring to, sir, is this. Up until recently, many of our civilian employees, because of the problem of mobility, because of the problem of the work that they have done, the nature of their work, they have been inclined to stay in a narrow functional area, such as supply. They work in that supply arena throughout their entire career.

We find that is a problem now when we look for people to promote into the senior executive service.

Now, the average military individual, because of the dual tracking and the multiple jobs normally does not have that problem. And, of course, in the Army at least to be promoted you have to be a generalist.

Senator GLENN. And there are some reasons, there, too, because those people came back into the command chain, and your bottom line is what is effective if we have to go to war. That is the bottom line.

General THOMPSON. Yes.

Senator GLENN. We can set up all sorts of nice little wiring diagrams as to how we are organized during peacetime, but unless it works when you go to war, when you really hit the button on procurement and so on, it does not make much difference.

Now the Navy used to have an AEDO Program. I don't know whether the Navy still has AEDO. Does it?

Admiral WHITE. Yes, sir.

Senator GLENN. Aeronautical engineering duty officer.

Now, at least when I was involved with some of those folks over in what used to be the Navy's Bureau of Aeronautics—and I am giving my age away by even saying BuAir——

Admiral WHITE. Naval Air Systems Command, Senator.

Senator GLENN. Yes. I was assigned there once and I went through the transition from BuAir to the Bureau of Weapons and all the other organizational changes that went on.

Mr. Chairman, just as an aside, when I went to that job, there was only one level above me for getting things done, and I could get a decision. But when I left that job 2½ years later, we had

three levels and we were not getting anything done. We had gone to a committee function, basically.

Admiral WHITE. Don't go back and look today, Senator. [General laughter.]

Senator GLENN. Well, there are probably several levels in between those, too.

At any rate, those AEDO officers at that time were assigned aircraft engineering duty only and were given special educational benefits to complete their engineering work and graduate work and all that sort of thing; thus never came back into the operational chain of command at that time. They could never expect to be CNO. They could never expect to have a carrier or command a major capital ship.

Now is that still the case?

Admiral WHITE. That is still the case with the aeronautical engineering duty officers. It is also the case with the ship engineering duty officers. They can never aspire to be CNO. They can aspire to rise to the top of the engineering pile that they are in.

Senator GLENN. Well, is that the case in all of the services now? If we go to a systems manager concept, would those systems managers not come back into a command status—if war starts?

Is that correct?

General SKANTZE. Yes. If a war started, at least in our command, we all have mobilization assignees to our jobs. So it is a function of what they would want to do with us. They would either leave us there or bring on board the reserve mobilization assignees.

Senator GLENN. Can someone come out of being a system manager for *x* years, 10 years or whatever it was, and would that person likely be assigned to man the Fifth Air Force, or whatever?

General SKANTZE. Well, it is a sort of speculative situation. But it seems to me, if the Armed Forces expand, as they normally do in wartime, you are going to create additional forces, or Air Forces, that you are going to have to man. It is likely that some people would be pulled out.

Admiral WHITE. My answer is in certain of the systems commands, on one specifically, in the Naval Air Systems Command, that would be true because he is an unrestricted line officer. In fact, one of the few Navy Cross holders that we have on active duty today is a line officer in charge of that systems command, but nevertheless has had extensive duty in acquisition.

Senator GLENN. Does your acquisition include testing?

General SKANTZE. Yes, sir.

Admiral WHITE. Yes.

General THOMPSON. Yes.

Senator GLENN. Is the final all full weapons system full up?

General SKANTZE. Yes, sir.

Senator GLENN. Do you find in your approach to this that you keep the people who have had combat experience or the squadron people to come in and do the testing under your command, or do you have your specialists who do test work year in and year out, year in and year out, for 20 years or so?

General SKANTZE. No. We have two types of testing, Senator. One is the basic development testing, such as in the case of the B-1B, which is going through that testing. Then you have initial oper-

ational test and evaluation, and that is the responsibility of the Air Force Test and Evaluation Center, which is totally independent. I think the other services have similar situations.

Admiral WHITE. Yes.

We additionally have a board of inspection and survey, as you know, that is over and above the OPTEFOR tests, which are independently run. We also have a board of inspection and survey.

Senator GLENN. Where do your systems managers come in now as far as setting the requirements for a new weapons system?

General SKANTZE. Only from a point of view of commenting on the user's operational requirements in terms of it being technically feasible to engineer it and make it come to pass.

The fundamental characteristics of the operational system are set by the user.

General THOMPSON. Sir, the user in the Army sets the requirement and then we participate with him in how we are going to solve that. And then we take the lead, if it turns out to be a materiel solution to that one.

Admiral WHITE. In the Navy, the operators set the requirements, similar to the Army. We participate with them.

I have the added function that if I think the requirements are too expensive, and, for example, if I can get 90 percent of the capability for half the cost, then I will question those requirements by the operator. I do that directly with the Chief of Naval Operations and the Secretary of Navy.

Senator GLENN. Mr. Chairman, you have some very basic, fundamental differences in approach to these things as far as what you come back to, in terms of combat requirements, as I said.

It has been argued as long as I have been around the military as to what is best on this. I don't know the answer any better than anyone else. So I am glad we are looking into this and getting it aired a little bit.

The Navy, for instance, has taken the approach that you need your rotation shipboard and back again. You have to know what the environment is like out there, and you have to operate aboard ship; and you are not really qualified for command and could never aspire to rise to a certain position unless you have had your ticket punched. In other words, in different command functions out there somewhere through whatever activities there were; and that you do not deserve high flag rank that would determine things in combat unless you have had experience with supply and logistics and perhaps even testing, unless you have used the equipment yourself out there.

Now, opposed to that, then, has been the specialty idea that you could siphon off certain functions and could take them off to one side, that you could sort of put the whole procurement function off to one side; and by setting the requirements and sort of forgetting about it and letting the people take this thing and develop whatever the weapon system is, you come out at the same end, with the combat usable equipment, but perhaps with fewer combat command people available for command functions out there.

I don't know whether I am making this very clear or not. But it is a different approach to things. The Navy has gone one track and the other services have gone to some extent on the other. It is not

all black and white, of course, I agree. But as to how you come up with a wartime expansion base that is best qualified to not only procure the equipment but to make the command structure in an expanding wartime situation where you need the maximum number of people for command purposes at that time, has been the difference between the two approaches to this among the services.

Maybe you gentlemen would like to comment on this. Maybe I have oversimplified it, or even made it more complex. I don't know.

General?

General THOMPSON. I think you have described it very well, sir. We have always had a mindset that says you have to command and you have to go out, and, as you say, get certain jobs if you are going to aspire to the higher level.

Senator GLENN. And one of the basic purposes is to have that command structure in place so that you can expand from it if war starts.

General THOMPSON. Right.

What we have been trying to do is to get away from that with this materiel acquisition management approach wherein we try to say to people that that is not the only way you can become a general officer, that you can become a general officer by specializing in acquisition. And, sir, this is acquisition in the broad sense that the admiral used it. It encompasses maintenance, supply, testing, the totality. We are going to try to recognize that fact, we are going to give people promotional opportunities, and we are even going to reserve some general officer jobs for these people.

Senator GLENN. OK.

Do you feel that in a wartime situation, you would still have the expansion base needed with the proper command people in charge to really expand? I guess that is the basic question.

General THOMPSON. Yes, sir. We do accept that and we, in fact, feel that we will be better able to operate because we will have people trained in peacetime to do that kind of wartime job in the acquisition process.

Senator GLENN. If you had program managers in the acquisition position, if war started, I would presume it would be highly unlikely that they would come back into a combat command situation because you would also be expanding your mobilization base at that point. Is that right?

General THOMPSON. Right.

But, sir, if we had a crackerjack officer who we felt was a really tremendous corps commander and he was a major general, I think we would take him and put him into a combat kind of job.

Senator GLENN. But if he has been in a systems command role or a managerial position in logistics and acquisition for many years, I doubt if you would know whether or not he would make a good corps commander.

General THOMPSON. Yes, sir, I think that is a valid point. It would depend on the timing.

Senator GLENN. Admiral?

Admiral WHITE. The Navy is quite similar. The CNO can take a person from the material professional field, in the scenario you pointed to, and send him out in that fashion. I cannot visualize that happening very often because of the reason that you gave.

In essence, however, we are very close to what the Army does.

Senator GLENN. Thank you.

General?

General SKANTZE. We have about 160,000 reservists in both the National Guard and Reserve, and that fundamentally is our initial expansion base—like the 36 Tac Fighter Wings, and 10 of those are in the Reserves with modern aircraft. The same situation is true of the tankers and the associate crews on the airlifters. That would be the fundamental expansion base.

I could visualize pulling individuals out of Air Force Systems Command. There would not be that many rated people, for example. As I explained earlier, the vast majority of our people are nonrated. Most of them would be engineers. Some of them certainly could fill logistics functions and maintenance functions, but I think they would be drawn on an individual basis.

We have a series of mobilization assignees who are actively participating with all our product divisions and all of our key officers have a mobilization assignee designated to replace him if he is pulled out.

So to the extent that the Air Force would draw on individuals in Air Force Systems Command, they could be selectively pulled out for proper assignment and then replaced by their mobilization assignee.

Senator GLENN. I am not sure I understand the mobilization assignee system.

General SKANTZE. Well, this is a reservist. For example, I have one, who is a two star reserve general, who is my mobilization assignee. If for any reason we went to war and the force expanded and somebody wanted me to come, Vince Luchsinger could come on board. He spends at least 2 days a week with me.

So those people are available.

Senator GLENN. All right. I think I understand.

So you could have somebody under your system who had been in procurement, acquisition or systems managing for, let's say 15 or 20 years, and if war starts, he could be reassigned to a command function immediately and the assignee would come in and take his place?

General SKANTZE. Yes.

I would say it would be done on a selective basis, as the Air Force deemed it needed the individuals. More likely, they would come after these 600 rated people who would be temporarily serving in Air Force Systems Command because they would have very recent experience in the active operational force.

Senator GLENN. I guess that might work. I would be a little bit dubious unless some very smart personnel director really picked these people very, very carefully. If you had somebody who had been out of a command function and operational function for a long, long time, I think you probably would compound the acquisition problem, No. 1, by taking that expert out of the spot right as you are trying to expand that activity, and you are tossing him into a command structure that he has not been in for 20 years, and compounding that along with it in the operational area. So you had better have a very smart personnel officer who administers this whole thing when it occurs, or so I would think.

Thank you, Mr. Chairman.

Senator QUAYLE. I would just add to that. I think it is a very valid point.

My thinking, Senator Glenn, is that probably, unless you find that smart person or manager, they would stay in the acquisition system, and as we expand for the wartime system, not only the operations are going to need more, but you are also going to need more in the acquisitions area because the industry is going to expand. How do you get that surge capacity? How do you go out there and deal with more contracts and get those weapons out in the field, weapons that are going to work at a very early period of time? That is going to be more important when the flag goes up.

I think, as we focus on this, I would just presume that we probably would not take a lot of these people who are specialists, who become specialists in acquisition, and all of a sudden assign them back out there in operations.

Senator GLENN. What we are trying to do is make acquisition as efficient as it possibly can be. That is the overall objective of this whole thing—to bring more efficiency to the whole system, if we can shed enough light on it to do that.

My own mind has not even begun to be made up in this particular area, obviously. I have tended to think that this area of procurement has gotten specialized enough. I am perhaps not as concerned about the military assignments of general officers and admirals to specific spots as I am that we have a very good, high level, civilian group that would be there right through this whole transition, or whatever. I guess it is a little bit like the parliamentary system, the civil service that runs it, whatever party is in power in a parliamentary system, basically. To some extent we operate that way, too, though probably to a lesser extent than they do in a parliamentary system, where you change governments, and you go back and you go into a certain place in parliament, or whatever, and the same civilians are there working, doing their jobs, and they are fairly high level, and have more influence and run the programs on a day-in-day-out basis. That is their career. It is a career civil service.

I don't know whether we can do more of that in this country or not. Maybe we lock ourselves in and take away some of the options, but I really don't know where I come down on this, yet, Mr. Chairman; that is, on rotating people through so they have the best command background, when lives are at stake out there, or letting them specialize for periods of time and maybe having less command capability at the end of that time period; though, meanwhile, we have done our job during peacetime.

I am concerned about what happens when we really go out here and the military has as its acid test when you go to combat. That is what you have to be setting up for, how to provide the proper command structure and people in that command structure at that time with the best experience.

Maybe you have a very selective personnel officer, as I said, who picks these people very carefully, and so it does not make any difference, where a good person in one job can be a good person in another.

It is a problem that has been around as long as I have had any connection with the military, and I hope we can shed enough light on it.

I would add that I do not think that automatically putting people into program manager spots and making them career automatically gets our weapons systems at any cheaper price. Maybe it does. But I would think perhaps an elevated career service in that area might possibly be something we might also want to look into that would expand that area of it, rather than just putting the military man off on a logistics function for *x* years and then expect him to be available to come back to command in case war starts.

Senator QUAYLE. Maybe this is a point we should pursue further at another time. But are you implying that we could rely more on the civilian force to do some of these things? Is that sort of one of your underlying assumptions?

Senator GLENN. Well, there are certain functions in procurement that, it seems to me, lend themselves to a permanent, lifetime career that does not necessarily have to be the military per se, as long as it is operating under military direction.

The efficiencies that we are looking for, which is the basic, bottom line of these hearings, maybe can be achieved as perhaps your civilian component gets a contracting expertise which is, perhaps, better than just a program manager coming in; although, any good program manager has as his No. 1 right hand, hopefully with 10 fingers on each hand to do all the things that have to be done, a very good, high-class contracting officer. If not, he is in deep trouble before he starts. That is No. 1.

Admiral WHITE. That is precisely, of course, what we do. The deputy usually is a civilian. What we are trying to do is to get more of the civilians to actually become the program manager.

Senator GLENN. But just making a career track with the military, basically on the logistics side, does not necessarily guarantee more efficiency in contract and procurement.

General SKANTZE. But we have some very bright people in all the services who aspire to program management. They literally do. It is something which they have the skills and talents for and which they become very good at. I think we benefit from using those people.

If you will indulge me, Mr. Chairman, in deference to what Mr. Hurtt said earlier, in my experience, the best program managers are not necessarily in industry. I suspect that all three who sit at this table have been in a position where we have told one of our major industrial presidents or CEO's to get rid of that guy because he could not cut the job.

The point is that you don't want to develop a mythology that says industry has all the best program managers simply because they have been around longer.

Senator QUAYLE. I think what we are trying to do is get to the bottom line, which is how do you get maximum efficiency out of this acquisition cycle. I think the more we focus on it and the more incentives we have for the military people to see a career path, the better able will you be to track good people in that. I really believe that the better background a program manager has, the more

training he has, the better potential he will have in operating that program.

We have seen some changes in the last couple of years where people who are put in as program managers for a very short-term period were in there, they really did not want to be there, but they had to do it and then they got out.

I think that kind of climate was a very unfortunate one.

Also, I think the programs that are run well, whether it is the one you mentioned regarding General Yates, or the B-1B, or the major programs, the ones where you put people in who have a very vast background, by and large those programs have been very much on schedule. They have come in many times under cost. I think there probably is a direct correlation with the background of the program manager and seeing efficiency and lower cost.

That is one of the reasons we have tried to focus on this.

I also think that in peacetime or in wartime you can specialize, and the more specialties you have to specialize in acquisition, is not a bad thing. It can be a very good thing.

These are certainly questions that we are going to continue to ask. I think that is a very valid one. Also, particularly, how we can utilize a civilian work force is certainly a legitimate goal because then, in fact, we can have the military perhaps for operation than acquisition, which can be fulfilled by civilians.

We are not going to contract out or use a lot of civilians out there in the combat zones. They will be in support capabilities. But you will not find them out there on the firing line.

Gentlemen, enough said.

We have a number of questions which we are submitting to you to be answered for the hearing record.

[Questions with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR DAN QUAYLE TO BE ANSWERED BY CALEB HURTT OF MARTIN MARIETTA

Senator QUAYLE. What minimum requirements in education, training and prior work experience do you require for program managers at Martin Marietta?

Mr. HURTT. Program managers have at least a bachelor's degree, usually in an engineering discipline. They must have had several years' experience in increasingly responsible positions in engineering. They have managed increasingly larger functions within a program, or on subcontracts, IR&D projects, CR&D projects, and/or small programs. They may have been deputy directors on programs.

Senator QUAYLE. Do you have a compulsory training program for your program managers?

Mr. HURTT. Compulsory preparation for program management is successful performance in previous assignments on programs as supervisors and managers of units within a program.

Senator QUAYLE. Could you describe your program manager career path program at Martin Marietta?

Mr. HURTT. The career path for program managers is engineer, senior engineer, supervisor, manager of a function on a program (such as Systems Engineering Manager for XYZ Program), Manager of a small program or deputy manager of a major program, manager of a major program. Frequently, proposal management experience is a factor.

Senator QUAYLE. Are there any corporate obstacles to program managers aspiring to top managemnt?

Mr. HURTT. The top executives of Martin Marietta have been program managers. Program management experience is seen as a requirement for executive positions.

Senator QUAYLE. Your program managers must of necessity work very closely with the program managers in the Department of Defense.

Do you have any observations on how the Department of Defense could borrow some lessons from industry dealing with the career development of their program managers?

Mr. HURTT. The DOD should make program management one of the career paths to top positions. It should be a prestigious position for which people are carefully selected, appropriately trained, well paid. They should make sure their high potential people are getting the right experience to prepare them for program management positions and that they are attending the excellent training programs offered by the Defense Systems Management College.

QUESTIONS SUBMITTED BY SENATOR DAN QUAYLE TO BE ANSWERED BY THE SERVICE WITNESSES

PROGRAM MANAGEMENT

Senator QUAYLE. What are your current minimum requirements in terms of acquisition management experience and training for candidates for Program Manager positions?

Army

General THOMPSON. Program unique experience requirements include knowledge of the commodity area of the weapons systems. Examples include aviation, missiles, tanks and communications. Desired types of experience include:

(1) Management experience in functional areas of research and development, logistics/fielding and procurement.

(2) Experience in materiel management at the Department of the Army or higher staff level.

(3) Battalion command or equivalent management experience.

(4) User experience and knowledge of system (hardware) operational requirements.

(5) Knowledge of industry and manufacturing capability of the U.S. Government, and

(6) Progressive assignments in project management offices.

Currently, PM candidates for PM positions must attend a 20 week Program Management Course, if not already a graduate, prior to assuming PM position. After selection as a PM, a PM may attend the Program Managers' Workshop at the Defense Systems Management College (DSMC). The DSMC designed this course specifically for PM designees and it provides performance oriented, problem solving training and is tailored to the need of the individual PM. The PM also attends the Contract Performance Measurement Course at DSMC. This course provides detailed training on the Defense Cost/Schedule Control Systems Criteria. This requirement may be waived if PM is graduate of 20 week Program Management Course. In addition, PMs are selected from Army officers who have had other training pertinent to program management. This includes graduate degrees in science, engineering and/or financial management and tours of duty in research and development and/or procurement activities.

Navy

Admiral WHITE. Program manager candidates must have served in qualifying duty (defined below) for 2 tours or a total of approximately 4 years as a minimum.

Program manager candidate training includes (in addition to a graduate technical or business education prerequisite) completion of the Program Management Course (PMC) at DSMC, Fort Belvoir.

Air Force

General SKANTZE. Our minimum requirements for Air Force military program managers are outlined in AFR 36-1, Officer Classification. These include an undergraduate degree, and in most cases a master's degree in technical or management disciplines and a residence course at the Defense Systems Management School. In addition, we look at quality factors, performance records, and any unique experience factors that are appropriate to the system involved.

Under the Systems Acquisition Civilian Career Management Program for Civilians (SACMPC), a civilian should have had experience in program control, contracting and manufacturing, and program/project management before becoming a program manager. Ideally, a civilian should also have some exposure to one or more of

the following: integrated logistics, data configuration management, test and evaluation, and engineering management. Completion of the DSMC Program Management Course is also desirable.

Senator QUAYLE. How do you define "acquisition management experience" when you review each candidate's service record?

Army

General THOMPSON. Service in positions requiring skills in the development of requirements, exploration of alternative system concepts, research, development and testing of hardware, engineering, procurement, production, fielding and logistics support of materiel systems.

Navy

Admiral WHITE. Acquisition management experience falls into three categories. hands-on acquisition duties, maintenance duties, and material support duties. Hands-on duties include being a Deputy Program Manager, a Business/Finance Manager, an Assistant Program Manager for a functional group (logistics, engineering, T&E, etc), an Acquisition Manager, a NAVPRO/SUPSHIPS Commanding Officer, a Project Manager Representative within a NAVPRO/SUPSHIP/DCAS office, and a Type Desk at a Systems Command. Maintenance duties include squadron, organizational, depot and staff billets directly involving the maintenance, servicing, upkeep and repair of weapons systems. Material support duties include supply officer billets, staff supply/logistics billets, and business/finance related billets.

Air Force

General SKANTZE. All Air Force Systems Command (AFSC) assignments whether in product division or headquarters which are involved in Research, Development, Test and Evaluation. User command assignments relating to the acquisition of a weapon system. Operational assignments in direct support of a weapon system. For example, these assignments include test pilot, or manager of a weapon system. Headquarters assignments outside AFSC, to include Headquarters Air Force and other MAJCOMs, in direct support of weapon systems acquisition. Any advanced academic assignments in a discipline directly related to development and acquisition of a weapon system. For example, assignments in the Education With Industry (EWI) program, attendance at the Program Manager's Course, Defense Systems Management College, and Air Force Institute of Technology degree programs in Systems Management and related career fields fall into this category.

Senator QUAYLE. In our review of the service records supplied in response to a written question during our hearing on December 13, we found cases of program managers of major systems with exclusively operational experience prior to appointment as program manager. Is this ever a sound practice?

Army

General THOMPSON. No, it is not considered sound. However, situations may occur when, because of the technical complexity of the program (particularly during early phases of the program when system design concepts are under consideration) that a program manager selectee with strong technical background, coupled with a wealth of operational experience, may be considered preferable to experience in acquisition management. These PMs would be complimented by a highly skilled acquisition management staff both at the program level and at higher headquarters.

Navy

Admiral WHITE. In very rare cases that is the only place where a particular expertise can be found. Thus, assigning a program manager with a specialized operational experience and little acquisition experience may be more advantageous than assigning an acquisition experienced officer without the specialized operational expertise. Unrestricted Line officer program managers, in addition to their acquisition experience, are all post-command officers. A Commanding Officer of *any* unit is a material manager responsible for logistics support and the material readiness of

his/her unit. Moreover, many command tours involve the introduction of new weapon systems—lead ships, new combat systems, etc.

Air Force

General SKANTZE. The list of program managers of major systems we provided on 13 December in response to a written question did not contain program managers with exclusively operational experience prior to appointment as program manager. The experience range of our SAR program managers at that time was between 3 and 20 years. As Commander, Air Force Systems Command I personally select our SAR program managers, with recommendations from the field commanders, to place the best person in each of these key positions.

Senator QUAYLE. The Army has recently required that all candidates for Program Management command positions attend the five month acquisition managers course at the Defense Systems Management College.

Would it be useful to require all the services to adopt a similar requirement?

Is there enough flexibility in each of the services' acquisition career development plans to allow for an across-the-board requirement of this type?

Army

General THOMPSON. Attendance at the five month acquisition managers course at the Defense Systems Management College is highly beneficial for Army program managers. In addition to designees for Program Management command positions, the course is a routine developmental requirement for officers in the Materiel Acquisition Management Program (MAM) and selected Department of the Army civilians in the Logistics and Acquisition Management Program (LOGAMP), the program manager candidates of the future. Due to the diverse nature of the Services, it would be more appropriate for other Services to address the question separately.

Navy

Admiral WHITE. Yes; the Navy requires all Lieutenant Commanders, Commanders and Captains en route to program management offices to attend the PMC. In terms of educational prerequisites, the PMC is considered equivalent to a Master's level degree in Business Management. From the Navy's perspective, yes, there is enough flexibility.

Air Force

General SKANTZE. We continue to support the use of DSMC as an essential element in the careers of our program managers. The program management career field depends upon continued training and DSMC fulfills this critical need. It is not only an essential element in the careers of our program managers but also in the careers of the program "team" members. We do not feel it should be a mandatory course legislated by Congress. Some of our program managers have not had the five month course but have had equivalent experience through various short courses at DSMC, Air Force Institute of Technology (AFIT) and other DOD schools, as well as university masters programs in systems management. It has always been an AFSC goal to send all of our program managers to DSMC. We currently send approximately 110 students per year (55 students/2 classes per year) to the Program Managers Course (PMC). Last year, 155 future program managers and/or key program players, attended the PMC for the Air Force.

From the inception of a career in the acquisition career field, flexibility is built into the acquisition career development plan to allow for our officers to attend the PMC at DSMC. He/she should attend the course in conjunction with assignments at program offices and gaining experience in the functional disciplines of the program office, i.e., program control, engineering, and/or project management. Although the PMC is an essential element in the program manager's development, it is not the sole acquisition management course available to train program managers. For the officer who may not have the flexibility in his/her career to attend the PMC there are numerous avenues available to gain this essential training and education. The Air Force Institute of Technology (AFIT) offers masters degrees in Systems Management as well as short courses (one to six week duration) in major acquisition, i.e., Introduction to Acquisition Management, Acquisition Planning and Analysis, Intermediate Program Management. DSMC also offers an Executive Refresher Course

(ERC) for our more senior managers as well as other outstanding short courses which are vital to our overall education and training needs.

Senator QUAYLE. Each of the services appears to require a different ratio of operational and acquisition management experience in the acquisition career path for military officers.

What is the rationale for your services' experience mix?

Army

General THOMPSON. Effective acquisition requires an understanding of both the equipment and what it must do; systems requirements are understood best by those who use and those who maintain the system. The military officer obtains operational experience as a user/supporter during his first six years of service with possibly a subsequent assignment as a field grade officer. Acquisition experience, a minimum of two developmental assignments in his sixth to sixteenth years, produces the qualified/certified materiel acquisition manager needed at the lieutenant colonel and above level. The proper mix of operational and acquisition experience is determined by the system and/or the phase of its life cycle. Early stages may require some operational experience; hence, a dual track officer; in later stages, a manager from an acquisition career field (sequential track officer) may be more desirable.

Navy

Admiral WHITE. This is not a criterion for the Navy. Our criterion is to use the best qualified officer or civilian for the job. Thus, diversity in backgrounds will be seen.

Air Force

General SKANTZE. The ideal career path for a program manager would include two operational tours. Military acquisition decisions are basically tradeoffs between increasing effectiveness of weapon systems and the cost of those capabilities. They require sound military judgment about warfighting capability, as well as a firm grounding in sound business practices and public policy. The operational tours help to reflect the concerns of the eventual user—the combat or support command which will employ the system.

Senator QUAYLE. According to the testimony the Task Force received in December and your testimony today, there has been a strong drive in all of the Military Departments to define a formal career path for program managers.

Beyond questioning whether these programs will produce qualified acquisition managers, we must examine the incentives that bright, young officers have to embark on such a career path.

What do each of you feel are the incentives for these young officers to enter this field?

Army

General THOMPSON. There are several reasons why bright young officers would want to embark on acquisition career paths. As we don't pay high salaries that are comparable to industry, our officers are drawn to the acquisition field because of a feeling of job satisfaction and recognition. The acquisition field offers young officers a great feeling of participation in developing the future weapon systems of the Army. This is tremendously important to many of the people in this field, especially those who served in our last war and are now beginning to reach key jobs in the decision making process. Many of these officers are working on some very important and exciting programs for the country's defense into the twenty-first century.

The ultimate incentive, however, is personal recognition. Recognition comes through selection for critical acquisition positions such as commanders of Army ammunition plants, depots, key staff positions on the Army Materiel Command and Department of the Army Staff, and the ultimate job in the acquisition field, product and program managers. With the successful completion of these difficult jobs comes both satisfaction and, if successful enough, promotion to general officer, an accomplishment by 20 program managers over the last six years.

Navy

Admiral WHITE. Three major incentives are:

1. The newly established Materiel Professional (MP) Career program reserves 80–90 flag billets for MP officers—providing a significant upward mobility to flag rank.

2. The challenge of business/acquisition aspects of the Navy provides post-graduate trained officers in related fields the opportunity to use their education in a meaningful and rewarding way.

3. Management of a Major Program is equivalent to major command of a sea or shore unit, thus adding to the candidate's flag potential.

Air Force

General SKANTZE. The Air Force has a long standing, well established career path for acquisition managers. That path extends from Second Lieutenant through the potential for general officer rank. The existence of this highly visible career path is a major incentive for young officers to enter the acquisition field. Promotion rates in the field are very competitive with those of their operational counterparts, which is clearly an incentive. As officers progress through careers in acquisition they are given meaningful responsibilities commensurate with their experience and have the opportunity to work on exciting, leading edge technology. In short, acquisition management is a very popular career field in the Air Force with many highly qualified candidates seeking admission.

Senator QUAYLE. The issue of flag and general billets reserved for acquisition managers has come up time and again during the course of discussions about the acquisition work force. There seems to be a general consensus that qualified acquisition managers must have adequate opportunities for promotion to the highest ranks in each of their respective services.

Conflicting with this goal are the statutory limitations on the number of flag and general officer billets, the minimum grade requirements for the major commands and the institutional bias in the services favoring operational commanders above acquisition managers for promotion.

With respect to the three and four star command positions in Naval Materiel Command, Army Materiel Command, Air Force Systems Command, and Air Force Logistics Command, is it current policy to require that any officer occupying such a position will have spent a substantial portion of his career in acquisition management?

Army

General THOMPSON. Absolutely. The current commander of AMC, General Thompson, had 22 years' experience in positions dealing with acquisition management and acquisition related functions prior to assuming his current duties.

Navy

Admiral WHITE. Yes, three and four star positions will require MP designated officers. By definition, MP officers will spend all tours subsequent to designation normally at the early-Commander point in acquisition, material and maintenance management related billets.

Air Force

General SKANTZE. The three and four star command positions within Air Force Systems Command need to be filled by officers with substantial acquisition experience. All three and four star commanders in Air Force Systems Command have extensive acquisition experience.

PROGRAM MANAGEMENT

Senator QUAYLE. Is the perception in the program management community that these billets are being filled by officers with a minimum of 8 to 10 years of acquisition management experience?

Army

General THOMPSON. The program management community fully recognizes that in order to achieve the rank of three or four star general in the field of materiel

acquisition, the individual selected must have spent a substantial portion of their military careers in positions of increasing responsibilities in materiel acquisition related assignments and have successfully demonstrated outstanding leadership and professional qualities throughout their military careers.

Navy

Admiral WHITE. It is difficult to judge perceptions within the community, however it is well recognized that the incumbents have devoted a significant portion of their careers to acquisition, material and maintenance support functions.

Air Force

General SKANTZE. Yes. If you look at the general officers we have in Air Force Systems Command, their average experience in the acquisition business is about 15 years. If you look at our top five officers, namely one four star and four three stars, they average about 20 years. It is very clear that there is an undeniable career path. Opportunities to proceed to the top are clearly evident and the perception of this is a chief motivation factor within the program management community.

Senator QUAYLE. Do the services consider management of a major program a major command?

Army

General THOMPSON. Management of a major program is not designated as a major command; however, the selection procedure for colonel/O-6 project managers parallels the command selection process by utilizing a central selection board. This, in turn, identifies the best qualified and results are released in conjunction with the Colonel's Command List. In consideration for brigadier general promotion, project manager selectees are recognized as having held O-6 commands. Brigadier general/O-7 program managers are carefully selected and managed in the same manner as any general officer.

Navy

Admiral WHITE. Yes, the CNO designates all Major Program Manager billets as equivalent to major command afloat or ashore and requires annotation in the officer's fitness report.

Air Force

General SKANTZE. Duties which include management of a major program are not specified as a command per se, but do equate to a commensurate level of responsibility. One indicator of whether the Air Force recognizes that equivalence is the promotion rate of program managers to brigadier general. Over the past four years program managers and those with recent program management experience have fared well in promotion to that grade. Specifically, in each of these years at least 60 percent of Systems Command's brigadier general selectees have had a program management background. The Air Force does recognize the similarities between managing a major program and commanding a major unit.

Senator QUAYLE. How is a successful tenure as a program manager weighted in the selection process for flag and general officer?

Army

General THOMPSON. Individuals assigned to program manager billets are given equivalent credit for O5 or O6 command, respectively. A review of the selection rate to brigadier general revealed that individuals assigned to acquisition management and acquisition related billets are faring well in attaining the rank of brigadier general.

Navy

Admiral WHITE. The promotion board precept, written and approved by the Secretary of the Navy, stipulates the weighting factor for program manager duty. Recent boards have attached high regard for successful program manager duty, and consid-

er Major Program Managers to have successfully completed a major command at sea/ashore tour.

Air Force

General SKANTZE. A successful tenure as a program manager is weighted heavily in the selection process for general officers. Program managers are in the mainstream of the AFSC mission and we demand high levels of achievement, accountability, creativity and professionalism from the individuals who serve in these vital positions. While the competition is extremely keen for promotion to general officer, successful performance as a major program manager is an important criterion to gauge future potential for top leadership positions. Out of the 27 general officers in AFSC, 19 have successfully run at least one program and 13 out of the 27 were promoted as program managers.

Senator QUAYLE. How many officers were selected for flag and general rank in 1984?

How many of those were selected were previously program managers?

Army

General THOMPSON. In 1984, the Army selected 64 colonels for promotion to brigadier general.

Last year, three colonels were selected for promotion to brigadier general who had served primarily as program managers. Additionally, three colonels who had research and development backgrounds and three who had senior procurement backgrounds were also selected. There is every reason to believe this trend will continue in the future.

Navy

Admiral WHITE. 43. Of these, five were in military specialty fields that are not in acquisition (chaplain, medical, etc.).

Three. In addition, six flag officers were selected with previous acquisition experience at other than the program manager level.

Air Force

General SKANTZE. Forty-seven Air Force officers were selected for promotion to general in CY 84; six were in Air Force Systems Command.

Of the six officers selected in Air Force Systems Command, three were previously program managers. However, the other three are career specialists with extensive experience in Air Force Systems Command. Each is now assigned to the Headquarters as the command chief of their particular specialty (contracting, comptroller and science and technology).

Senator QUAYLE. Do you have any program managers who had one year or less in acquisition management at the time of appointment?

Army

General THOMPSON. With the exception of two program managers (BGs Infante and Harmon), all general officer program managers had greater than one year in acquisition management billets prior to their appointment. In fact, the average experience level of the Army's eight program managers is three years five months prior to their appointment. As for General Infante, although he had not performed as a program manager prior to his current assignment, the Army's senior leadership felt that he could manage the Patriot Air Defense Missile System very effectively given his strong tactical Air Defense background, his experience in Europe—where Patriot is being fielded, and his credentials as a Systems Analyst. General Infante is complemented by a highly professional acquisition staff both at the program level and at the Headquarters, Army Materiel Command.

This decision, made about two years ago, has proven to be a wise one and points out the need for flexibility in the assignment of general officers in the acquisition arena.

As for BG Harmon, Joint Program Manager and Director of Joint Task Force, Tactical Fusion Program Management Office, he also had not performed as a pro-

gram manager prior to his current assignment. However, the Army's senior leadership felt that he was eminently qualified for this important developmental position having both the tactical intelligence background and solid ADP experience that is so necessary for the position.

Below the general officer level, the Army has no major program managers who had less than one year of acquisition experience prior to appointment as a program manager.

Navy

Admiral WHITE. None of the Navy program managers had one year or less experience in acquisition management at the time of appointment.

Air Force

General SKANTZE. None of our current program managers on major programs have less than one year acquisition experience. In fact, as of December 1984, their average experience was 13 years with the most inexperienced having 3 years.

Senator QUAYLE. Air Force General Steere, in a written response to a question posed at the December 13 hearing, stated that the average tenure of program managers in Air Force Systems Command is 29 months. Is that enough time for a program manager to develop a sufficient understanding of his complex program environment?

General SKANTZE. Yes. I think the Air Force program managers are able to develop a sufficient understanding of their programs in a matter of months. The 29 months average tenure reflects the current average length our program managers are assigned to major programs; it does not reflect their total previous acquisition experience.

Senator QUAYLE. Overall, does the Air Force feel that this average (29 months) is an adequate tenure?

General SKANTZE. Yes. But recall this is just an average, a snapshot in time. I won't say that short tenure is appropriate in many cases, however on a selected basis, the short tenure might be appropriate. I think in reality you have to gauge that to your needs at the time and who would be the best individual to carry that program to the next phase.

Senator QUAYLE. What has been your experience with the Congressionally-mandated four year tenure requirement for program managers? Has the implementation of this requirement in any way provided a disincentive for qualified officers to become program managers because of the unwillingness to spend four years in a position?

Army

General THOMPSON. Army officers recently selected for assignment as PMs for major programs for which a 4 year tour is mandated by Congress have unanimously accepted their assignments.

Navy

Admiral WHITE. The Navy has required a minimum four year tenure since 1978 and our current average for Major Defense Acquisition programs is 4 years and 1 month.

Not that we're aware.

Air Force

General SKANTZE. To date, our experience in Air Force Systems Command with the congressionally-mandated four-year tours for program managers has been limited and uneventful. The required tenure pertains to officers assigned as SAR program managers after 19 Oct 84. We have seven officers who were assigned after this date. None of these officers have been moved.

Additionally, a four year tenure requirement for civilians presents no problem, since our civilians have traditionally provided long-term continuity and corporate knowledge. This could be made a condition of employment.

So far, we have not surfaced any disincentives because of an officer's unwillingness to serve a four-year tour as a program manager.

CONTRACTING OFFICERS

Senator QUAYLE. Last year, the Department of Defense awarded in excess of $180 billion in contracts. We are seeing a steady increase in the dollars expended and the number of contract actions.

Are each of the services increasing personnel and training resources to allow the contracting officer work forces to meet these trends?

Army

General THOMPSON. Army Central Procurement spaces have been increased by the following numbers for each of the past several years:

Fiscal year 1980	757
Fiscal year 1981	624
Fiscal year 1982	76
Fiscal year 1983	52
Fiscal year 1984	[1] 583
Fiscal year 1985	[2] 98

[1] 519 spare parts.
[2] Spare parts.

All modes of training (resident, on-site university/college courses, etc.) have been expanded in fiscal year 1985 and will continue to be increased for the next several years. The US Army Logistics Management Center is now providing procurement training via its new Satellite Education Program. Approximately 150 to 180 military and civilian procurement personnel will receive the live one-way video, two-way audio instruction simultaneously at nine Army/AMC locations. Live presentations are augmented by study of printed materials and additional instruction via the electronic blackboard technique. The additional number of procurement careerists receiving quality training through this new mode will greatly assist in reducing our training needs and enhance the professional development of the Army procurement community.

Navy

Admiral WHITE. From fiscal year 1979 through fiscal year 1984, the Navy's work load (actions over $25,000) increased 110 percent in dollars (from $20 to $42 billion) and 52 percent in terms of actions (from 48,000 to 73,000).

The Navy has strengthened its military contracting officer work force to meet the increasing work load over the past few years. Concurrent with the Navy's total personnel increase to support a 600 ship Navy, the Supply Corps has grown approximately 10 percent in total billets for the above period. We are in the process of reviewing all Supply Corps billets and anticipate an 80 percent increase in the number of contracting officer designated billets. The increase in designated billets will require additional funding for post graduate education and service school training to qualify officers to fill these newly identified billets.

During the above period, the civilian contracting (GS-1102) work force and procurement training resources have also increased. In fiscal year 1984, Navy added about 400 positions to the contracting field, mostly in the Naval Supply Systems Command for spare parts procurement. This raised the total Navy GS-1102 staff to 3,750 by September 30, 1984. In addition, Navy added about $300,000 to its centralized procurement training fund in fiscal year 1984.

Air Force

General SKANTZE. While we were able to increase the contracting work force by about 10 percent between fiscal year 1982 and fiscal year 1984, AFSC dollars obligated increased almost 60 percent. We have had no choice but to better train and equip our people. To this end, Air Force initiated and AFSC implemented Project COPPER TOP. This is an ambitious program to significantly reduce current mandatory (required) training voids and provide for future contracting work force training needs. Major objectives include additional management emphasis and funding for key mandatory courses, raising the priority of contracting courses to "AF Directed Training" (the highest, thereby increasing absolute numbers available), and developing/emphasizing alternative training approaches.

Senator QUAYLE. Are the new Federal Acquisition Regulations providing the necessary tools for the contracting officers to be more responsive to the needs of the program managers?

The concept under which the FAR was drafted assumed greater cost effectiveness by giving the contracting officers the basic guidelines and allowing the individual the flexibility to apply common sense and business judgment in a particular contract action. It is my understanding that each service is adding a significant number of explicit policy directives as the FAR is implemented through the chain of command. For instance, the Air Force alone provided a 200 page supplement to the original FAR.

Isn't this undermining the basic rationale of the FAR?

Aren't the services practicing the same micromanagement that they resent in congressional actions?

Army

General THOMPSON. The Federal Acquisition Regulation (FAR) System provides the necessary tools for contracting officers to perform the contracting function from major systems to small purchases. The acquisition process involves the mutual coordination and cooperation of all individuals participating, from the contracting officer to the project/program manager, to comptroller, legal counsel, engineering, logistics, etc.. There are no inhibitors to this coordination in the FAR System. Innovative techniques to improve and streamline acquisition are devolved notwithstanding the FAR, and are encouraged at all levels.

If it were truly assumed in creating the FAR that it would only provide basic guidelines and optimize contracting officer business judgment and latitude then the FAR failed or that goal was forgotten or altered in the many years of its painful development. The FAR, in fact, would then be primarily comprised of broad policy statements and general guidance. In fact, the FAR is merely a rewording and lowest common denominator (non-Defense) distillation of existing detailed regulations in existence at the time of its issuance (i.e., the Defense Acquisition Regulation (DAR), the Federal Procurement Regulation and the NASA Procurement Regulation). Agency-peculiar procedural guidance was by-and-large not adopted in the FAR or was specifically left to Agency supplementation. In essence the DOD FAR Supplement picked up the Defense-peculiar guidance that had been in the DAR but was not deemed of interest to the remaining "Federal" acquisition community (where only 15% of the procurement dollars are obligated). The Army Federal Acquisition Regulation Supplement (AFARS) provides almost exclusively flow-down procedures from the FAR or DFARS essentially delegating authorities or responsibilities as imposed by law and the FAR and DFARS.

Neither the DFARS nor the AFARS is micro-management. It does not direct acquisition managers as to how to perform their functions. In fact, the DOD policy of controlled decentralized management is most evident in the Army acquisition structure. Significant acquisition authority and responsibility is delegated to 26 heads of Army contracting activities and, in particular, to the Commander, U.S. Army Materiel Command. The massive scope and scale of the DOD/Army acquisition mission and organization dictates a need for some uniform rules and standards in the management and execution of this critical function. Executive Order 12352, Procurement Reforms, in fact, requires such standards. The FAR does not purport to establish such standards, addressing primarily the technical processes and work products of business transactions between Government and the marketplace.

Navy

Admiral WHITE. Most of the Federal Acquisition Regulations (FAR) are not new. The procedural requirements and substantive rules of government contracting have not significantly changed. What is different is the language used, the format of the document and the way the information is organized. Contracting officers have always been responsive to the needs of the program manager. This was true under the Defense Acquisition Regulation (DAR) and continues to be true under the FAR.

The FAR authorizes the services to issue regulations as required to (1) implement FAR policies and procedures; and (2) provide additional policies, procedures, solicitation provisions or contract clauses that supplement the FAR. The Navy Acquisition Regulations Supplement (NARSUP) was issued within the socpe of this authority and is limited to internal Navy guidance (e.g. designations and delegations of authority, work-flow procedures, etc.).

Air Force

General SKANTZE. The Federal Acquisition Regulations System was established with the intent of codification and publication of uniform policies and procedures for acquisition by all executive agencies. The Federal Acquisition Regulation (FAR) is envisioned as the primary document, but not the only document, within that system. The system anticipates, and makes provision for, agency acquisition regulations that implement or supplement the FAR. These implementing or supplementing regulations are limited to those necessary to implement FAR policies and procedures within the agency, and, additional policies, procedures, solicitation provisions, or contract clauses that supplement the FAR to satisfy the specific needs of the agency.

The fact that additional implementing and supplementary regulations have been issued by the military services is reflective of two circumstances. First, the FAR cannot address the "specifics" of implementation for all agencies without becoming an unwieldy document. For example, FAR Subpart 1.6 "Contracting Authority and Responsibilities" is a one page document which addresses delegation of procurement authority from the agency head to the individual contracting officer. This subpart clearly establishes a requirement for implementing supplementary regulations to set up contracting activities, delegate procurement authority, limit delegations of authority; and select, appoint, and terminate contracting officers. These implementing regulations are, of necessity, more lengthy than the basic FAR coverage, since they address the specific procedures and safeguards to be employed. In addition, they assure the effective implementation of FAR guidance.

Secondly, the use of supplementary and implementing regulations reflects a Federal Acquisition Regulations System that is healthy and vigorous. The system encourages wide latitude in the exercise of good business judgement at all levels, not just at the level of the contracting officer. At levels above the contracting officer, this exercise is often reflected in agency supplementary regulations. These supplementary regulations serve a valuable purpose by providing a corporate memory of proven techniques and successful approaches. The communication of these techniques and approaches in a formal and lasting document ensures they are effectively passed on to contracting officers without each having to learn these valuable lessons through individual experience.

We have found that the Federal Acquisition Regulations System, supplemented and implemented as necessary by the agencies, is providing a flexible and effective tool in the hands of contracting professionals. We work constantly to ensure that the calibration of our supplementary regulations is such that they promote flexibility and creativity among the workforce, without compromising the exercise of good business judgment.

Senator QUAYLE. What incentives do the services provide for qualified personnel to become contracting officers and what are the rewards and incentives to keep outstanding individuals in that career path?

Army

General THOMPSON. The Procurement Career field for both military and civilian is considered one of the most attractive in the Army. Professional development rewards and incentives include fully funded graduate programs (military), long-term training in contract and acquisition management at various colleges/universities, training with industry and a host of other procurement related courses at Government and non-Government schools. Incentives are also provided through the opportunity to work in a challenging and ever changing environment, where high quality performance in progressively difficult procurement management positions offers promotion potential to the General Officer/SES level.

Navy

Admiral WHITE. The incentives for a military officer to become a contracting officer include increased opportunity for advanced education, a recognized professional sub-specialty, and rotational tour assignments in key procurement positions. Current incentives are considered adequate for bringing our outstanding military officers into the procurement career field, as there are eight applications for every position. Except for the opportunity for promotion to Captain there are no tangible incentives or rewards to keep our outstanding military contracting officers.

In our civilian community, incentives for entering the contracting (GS-1102) career field include formalized training, recognition as a procurement professional, fairly rapid advancement to positions of responsibility and opportunities for promotion to managerial positions. Incentives and awards for keeping our civilian contracting officers are effected through the Merit Pay and Incentive Awards Programs.

Air Force

General SKANTZE. Within the contracting field, becoming a contracting officer carries with it recognition that a high level of professionalism, competence, and expertise have been reached. Accordingly, the competition, including individual career planning, for these positions is robust and healthy. Under our performance management systems, we strive to reward outstanding performance with awards and promotions. Further, for both our civilian and military contracting officers, we have a variety of existing career incentives, including career broadening assignments, education with industry, and long term academic training.

CIVILIAN WORK FORCE

Senator QUAYLE. Several years ago, we scrapped the PACE examination process for selecting entry level civil servants. Since that time, we have relied primarily on the Schedule B hiring process for entry level hiring. Two criticisms have been voiced about the Schedule B process. Its critics claim that it does not insure the necessary educational background for entry level civilians and that under Schedule B, a federal agency cannot offer the prospect of career status.

Is the Schedule B hiring process adequate for our needs?

Do you feel the need for a waiver from OPM?

Army

General THOMPSON. For many years, Army has enjoyed a favorable reputation in the Federal community for the high quality of its intern program. Army is fully committed toward recruiting high potential individuals for intern positions, and the Schedule B appointing authority permits us to do so. Although procedures established by OPM for obtaining Schedule B appointing authority are cumbersome, i.e., on a case-by-case basis, Army was afforded relief from this administrative burden by obtaining blanket authority from OPM for Army-wide use. Qualification requirements concerning education are no different under Schedule B from those required under the PACE. Schedule B hiring authority permits appointment of outstanding scholars without regard to other eligibles. Outstanding scholars are college graduates with a grade point average 3.5 or higher on a scale of 4.0 for all undergraduate courses completed toward a baccalaureate degree or who stand in upper 10% of their graduating class. Consequently, the Schedule B authority has enabled Army to recruit from colleges and universities, thus assuring necessary educational background for entry level civilian positions. However, without a viable method for conversion of Schedule B appointees to the competitive service at the end of their internships, recruitment efforts could be impaired.

Army led the way in DOD in seeking from OPM a method for noncompetitive conversion of Schedule B appointees at the GS-9 level. OPM has acknowledged the problem and has undertaken several initiatives towards assuring that existing merit (competitive) procedures will work. Early results are positive although numbers are too small to be conclusive. Army is closely monitoring conversion requests and will not hesitate to reopen the conversion issue with OPM should significant problems arise.

Navy

Admiral WHITE. As now structured, we do not feel that the Schedule B hiring process is optimum for the contracting series because of the requirement that Schedule B appointees be converted from excepted to career conditional status at the GS-7 level by competing with others who have taken the mid-level examination. In this process non-veterans are at a disadvantage. We have asked the Office of Personnel Management to develop a new competitive examination for the contracting (GS-1102) series. OPM has agreed and tentatively plans its administration in early 1986. In view of this examination, no OPM waiver is necessary for the contracting series at this time.

Air Force

General SKANTZE. Yes, with reservations. We have been able to recruit and hire high quality employees under Schedule B/PAC authority. AFLC, for example, has hired over 900 Schedule B/PAC employees and approximately 85% of these have college degrees. (90% of GS-1102 hires have college degrees).

Our reservation is due to the uncertainty of the conversion process to competitive service. Until we see that the process enables us to convert and promote trainees to the journeyman level, we cannot endorse the process fully.

We feel relief is needed in the conversion of Schedule B/PAC appointees to competitive service. While we understand that OPM does not have the authority to provide for non-competitive conversion to competitive service under the law, an Executive Order or legislative change could correct this situation for all Schedule B/PAC employees. Our limited experience with the competitive conversion process has been satisfactory. However, until we have had more extensive experience with competitive conversion, we shall not be able to tell whether the process will meet our needs by enabling us to retain and advance the employees in competitive service. The competitive examination for the GS-1102 series, currently under development at OPM will correct the situation for the contracting career field.

Senator QUAYLE. On January 30, 1985, the Office of Secretary of Defense issued a directive 1430.4 on Civilian Employee Training. The directive requires the establishment of formal training programs for civilian employees in each of the military departments.

What are your plans for implementing this directive?

Army

General THOMPSON. The Department of the Army has clearly defined the civilian employee training program requirements and responsibilities of major commands, installations and independent reporting activities in Army Regulation (AR) 690-400, Chapter 410, 15 June 1983. The AR complies with the specifications and intent of the DOD Directive 1430.4, subject: Civilian Employee Training, August 5, 1969 and its recent successor, dated January 30, 1985.

The Army Civilian Training and Development (TD) program operates on a decentralized-centralized basis. The requirement for identifying needs and providing training is delegated to the lowest practical organizational level. Oversight management of overall TD program performance is centralized at the Department of the Army level.

That part of civilian TD applicable to employees equating to the military officer ranks—administrative, technical and professional employees in Army civilian career programs—is centrally directed beginning at the intern (GS/5-7) level and continues through the higher grades with our long- and short-term training programs.

In addition, we are now working to increase the efficiency of our training program through a comprehensive system called the Army Civilian Training, Education and Development System (ACTEDS). ACTEDS is designed to ensure essential technical, managerial and professional training and development for the Army's key civilian employees—our civilian equivalent to the military officer corps. ACTEDS is based on prior job analysis to identify critical skills and competencies by ocupation and grade level for civilian career program employees at the intern through Senior Executive Service level. A structured total career plan is then developed, involving a blend of developmental work assignments and formal training. ACTEDS requires deliberate management involvement in career planning to assure that the most promising employees receive sequential and progressive training at critical points in their career development. ACTEDS will add to the Army civilian TD system the ability to produce systematically developed "manager-leaders" and will vastly improve the overall efficiency of the system.

Navy

Admiral WHITE. DOD Directive 1430.4, is under final review by OPNAV, and an implementing instruction will be issued in June 1985. This directive is general in nature and covers a wide variety of different career fields. The procurement community already has established DOD-wide mandatory training plans for its members under the DOD Civilian Career Program for Contracting and Acquisition Personnel

(DOD Manual 1430.10-M-1). This program was implemented by Navy in OPNAVINST 12400.1 on 1 April 1983.

Air Force

General SKANTZE. Civilian Employee Training, the cited DOD directive, is an update of an existing publication. For implementation, Air Staff will be making any required revisions to AFR 40-410, Civilian Personnel Training and Development. The planned AF Acquisition Civilian Career Enhancement Program will address all formal training requirements. As an example of AFSC efforts in this area, under Project COPPER CAP we have obtained an additional $250,000 for this fiscal year to support required contracting training.

Senator QUAYLE. One of the only mechanisms for bringing college graduates into the entry level is through the Federal Government Procurement Intern program. It is our understanding, however, that only 5-10 percent of entry level hiring is done through this program.

Are we making sufficient use of this program to meet our needs?

Army

General THOMPSON. Army has historically used the intern program to assure high quality intake and training. Statistics for End FY 84 reflect that 80% of the entry level (GS-5 and 7) Procurement Career Program employees on board in the Army were hired through the Procurement Intern Program.

Navy

Admiral WHITE. The Navy makes extensive use of intern programs, hiring about 60 procurement interns a year. This represents roughly 10 percent of its current hiring for the contracting series. The Task Group Six Report on Procurement Career Management Programs, prepared under the direction of Rear Admiral J. S. Sansone, Jr., recommends at a minimum, that 20 percent of new entry level hires be brought in through centralized procurement intern programs, and if approved, would meet the Navy's needs.

Air Force

General SKANTZE. The Air Force has a number of intern-like programs to bring college graduates into the procurement career field. The COPPER CAP program, designed to provide intensive career development for a select group of high potential employees, who possess the ability and background to progress to highly skilled journeyman and managerial levels, is an AF-wide intern program. In addition, command and local intern/trainee programs are used to replenish the procurement work force. Over the past few years, the Schedule B/PAC authority has been used extensively to recruit trainees in the GS-1102 series, and a large majority (approx 90%) of these have been college graduates.

Senator QUAYLE. Although the major focus of the effort to enhance acquisition career paths has been on the program managers, other fields, such as logistics, maintenance, and quality assurance are also extremely important in the acquisition cycle.

Are the services addressing the career path issue in these fields as well?

Army

General THOMPSON. The Department of the Army (DA) addresses the career path issue in each of its 24 civilian career programs. These career programs include maintenance, quality and reliability assurance, and other logistics-related areas (i.e., transportation, supply, contracting and acquisition, and engineers and scientists). DA is presently operating a career development and staffing program specific to the logistics and acquistion management functions. The Logistics and Acquisition Management Program (LOGAMP) in DA covers all six of the aforementioned career programs. The program's goal is to provide cross-training in a variety of logistics occupations to better equip our top civilians to be managers. It will ensure that essential technical, managerial, and professional training and development is systematically accomplished for LOGAMP participants, and that LOGAMP key positions are

staffed by employees possessing required LOGAMP competencies. Career paths leading to target key positions at the GS–GM–14, 15 and Senior Executive Service levels are outlined both in individual career program issuances and in LOGAMP guidance.

Navy

Admiral WHITE. Yes. The Navy has a Logistic Career Program which includes fields such as integrated logistics support, maintenance, supply, and quality assurance. The program covers specialists and technicians at the entry, journeyman, and the managerial levels.

At the entry level, we have two methods for developing personnel in the career field. The first is the formal Navy Logistics Intern Program that is centrally supported. The second is a trainee program that is executed by local activities using their own resources. We are currently developing a Career Development Program for Quality and Reliability Assurance for civilian personnel within the Naval Material Command. This program will define career paths for civilian engineers and quality assurance specialists within the Navy.

Programs are in place to strengthen the skills of logistics personnel at the journeyman and managerial levels. A formal logistics training center offers broad overview courses and specialist courses directed to areas such as maintenance, supply support, and transportation. The courses are structured to meet the needs of various levels of personnel, from GS–05 to SES members. The need for a structured career path in the logistics disciplines is highly visible. We are currently evaluating the Navy Logistics Career Program to ensure its ability to meet the overall requirement to improve acquisition management.

Air Force

General SKANTZE. The Air Force has vigorously promoted the enhancement of career paths in such fields as logistics, maintenance, and quality assurance. The Air Force-wide Logistics Civilian Career Enhancement Program (LCCEP) has been successfully identifying and developing high potential employees in logistics, maintenance, and quality assurance since 1979. This program has also been an excellent source for identifying highly professional and mobile candidates to fill key positions within the Air Force.

In addition, the Air Force Institute of Technology (AFIT) provides individuals in these career fields with additional opportunities for training and education through short courses throughout their careers and graduate programs in acquisition and logistics.

HQ AFSC administers the formal AFSC Civilian Quality Assurance Program to identify and provide mission essential training needs. This program addresses the career path issue from both product division and contract administration viewpoints by intensification of training in specific areas in accordance with individual assignments and requirements. These training needs do vary and are identified and prioritized by computer using inputs from individual AFSC components.

ACQUISITION, SUPPORT AND MAINTENANCE EXPERIENCE

Senator QUAYLE. In order for the members of the Subcommittee to have a clear understanding of the level of acquisition experience and training of those officers in Army Materiel Command, Air Force Systems Command, Air Force Logistics Command, and Naval Material Command involved in the acquisition, maintenance and support of weapon systems at the grade of O–7 and above, please provide the following information for the record.

1. The name and service record of each incumbent;
2. The responsibilities of each position identified; and,
3. The number of years experience in the acquisition, support, and maintenance of weapon systems for each incumbent.

Army

General THOMPSON. The name, position, and service profiles of General Officers in the Army Materiel Command have been provided to the Committee under separate cover. (Retained in committee files.)

Navy

Admiral WHITE. The following pages contain the requested data. (Pages retained in committee files.)

Air Force

General SKANTZE. AFSC General Officers Involved in Acquisition, Maintenance, and Support of Weapon Systems. (Information retained in committee files.)

Senator QUAYLE. What is the departure rate of the upper ranks of procurement officials?

Army

General THOMPSON. The departure rate for military procurement officers is slightly greater than the Army average. Until recently, selection rates of procurement officers for promotion to Colonel and for attendance at senior service college was below the Army average. With less promotion opportunity, more procurement officers left the Army. However, following a series of Army initiatives to revitalize the career field and provide experienced procurement officers a greater opportunity to serve at the General Officer level, the 1984 selection rates exceeded the Army average for the first time. The effect of these initiatives is taking hold and it can be reasonably assumed that the departure rate of procurement officers will ease as more recognize their increased promotion potential.

Navy

Admiral WHITE. Navy Supply Corps Flag Officer departure rate is not considered excessive at two to three retirements per year. There is no trend relative to procurement Flag Officers leaving the Navy any earlier than the normal four to five years in grade, which is the same for their counterparts in other professional communities.

The departure rate for our senior civilian contracting personnel (SES) is not considered excessive. In most cases, those who do depart, leave for a senior management position in procurement with another Navy command or another Government agency.

Air Force

General SKANTZE. We don't have this specific data but have tracked, since inception of our COPPER CAP Program in FY 73, the retention rate for these procurement interns. AFSC field activities have managed to retain 60 percent of their former COPPER CAPs. Aeronautical Systems Division has been able to determine that, if all their former interns who are still working for the Federal Government were counted, retention rate would increase to approximately 90 percent.

Senator QUAYLE. Are we losing too many of our most experienced procurement people to defense contractors?

Army

General THOMPSON. No statistics are available which identify the actual number or percentage of procurement officers who leave government service specifically to go to work for a defense contractor. However, there does not appear to be a drain of our more experienced procurement officers, military or civilian, leaving prior to eligibility for retirement.

Navy

Admiral WHITE. Most of our procurement Flag Officers have reached the pinnacle of their careers professionally and have limited or no additional opportunity for advancement to the three and four star ranks. There is great pressure to retire after the normal 4 to 5 years in grade in order to make room for those other outstanding officers aspiring to flag rank. The departure rate of our Navy procurement Flag Officers to defense contractors is not considered excessive.

Similarly, there is also no indication that our top civilian procurement officials (SES) are leaving at any appreciable rate for jobs with defense contractors.

Air Force

General SKANTZE. We don't keep statistics in this area, but a correlative of the Aeronautical Systems Division experience would indicate less than 10 percent of their former COPPER CAPs have been lost to private industry.

Senator QUAYLE. What incentives are needed to retain these experienced officers?

Army

General THOMPSON. The Army identified the need for additional incentives in 1983 and set forth a series of intiatives for military procurement officers which includes an increased opportunity for advanced schooling and a clear progression pattern for advancement to the General Officer ranks. Key procurement positions at the grades of Lieutenant Colonel and Colonel have been redesignated as command positions. This number has increased from 3 to 58 over the last 2 years. Because command experience greatly enhances an officer's career, the number of procurement officers selected for senior service college and promoted to General Officer should continue to improve. Since 1983, 6 additional General Officer billets have been designated for procurement officers. The procurement specialty is one of the key participants in the Army's Materiel Acquisition Management (MAM) Program which will result in additional acquisition training and the opportunity to serve in repetitive procurement assignments. Coupled with the increase in military, civilian and industry training programs; the Army can look forward to a pool of seasoned, highly qualified procurement officers to fill these General Officer positions. With these newly established incentives, the procurement officer specialty is considered among the best in the Army.

Navy

Admiral WHITE. The Navy's problem is not one of retaining experienced Flag Officers and senior civilians (SES), but rather one of maintaining a qualified pool of outstanding procurement professionals at the commander level for our military, and at the GS-14/15 level for our civilians, who aspire to senior management positions.

One function of the Navy Contracting and Acquisition Career Management Board is to study the departure rate and underlying causes, to determine what mix of incentives would best help the Navy retain its most experienced personnel. Incentives now available through the OPM Merit Pay System and other intiatives are already available, i.e., bonuses, awards, pay increases, growth opportunities, educational programs, and rotational assignments.

Air Force

General SKANTZE. We are concerned that Civil Service employment is steadily declining in attractiveness (including its relative level of pay and benefits) which generally acts as a negative incentive. Specifically concerning procurement officials, a positive incentive would be realistic grade levels comparable with private industry. Further, despite greatly increased work load and responsibilities, information from OPM indicates that the average GS-1102 grade level Government-wide has remained the same since 1969.

Senator QUAYLE. General Skantze, please provide information on the extent of Air Force utilization of civilians as program managers and deputy program managers.

General SKANTZE. We currently have one civilian program manager and 10 civilian deputy program managers on our 33 SAR programs.

Senator QUAYLE. General Skantze, please provide the number of civilians serving in these positions (program manager and deputy program manager), the years of training and background in acquisition management and the specific positions held by civilian program and deputy program managers.

General SKANTZE.

Name: Individual No. 1.

Organization: ASD.

Program: Adv Tac Fighter.

Position: Deputy PM.

Title: Supervisory Systems Management Engineer GM-801-14, assigned—May 1984.

Courses: Program Management DSMC, completed June 1979.

Total acquisition experience: GM-801-14—1 yr 10 mos; GS-801-13—8 yrs 11 mos.

Education: Bachelor of Science Degree in Mechanical Engineering.

Name: Individual No. 2.
Organization: ASD.
Program: C-17A.
Position: Deputy PM.
Title: Supervisory Systems Management Engineer GM-801-15, assigned—December 1980.
Courses: Effective Negotiating, completed November 1978; Life Cycle Costing, completed June 1975.
Total acquisition experience: GM-801-15—4 yrs 3 mos; GM-801-14—9 yrs 5 mos; GM-801-13—8 yrs 5 mos; GM-801-12—2 yrs 9 mos.
Education: Bachelor of Science Degree in Aeronautical Engineering.
Name: Individual No. 3.
Organization: ASD.
Program: KC-135R.
Position: Deputy PM.
Title: Supervisory Systems Management Engineer GM-801-13, assigned—January 1983.
Courses: Analytical Decision Making, completed November 1980; Program Management DSMC, completed June 1977.
Total acquisition experience: GM-801-13—5 yrs 10 mos; GM-346-13—1 yr 2 mos.
Education: Bachelor of Science Degree in Mechanical Engineering; Master of Business Administration.
Name: Individual No. 4.
Organization: ASD.
Program: MARK XV.
Position: PM.
Title: Supervisory Systems Management Engineer GM-801-14, assigned—January 1985.
Courses: Air Force Institute of Technology System 400, completed August 1984; Air Force Institute of Technology System 223, completed April 1980; Systems Acquisition Management Course, completed January 1984.
Total acquisition experience: GM-801-14—2 mos; GM-1101-13—8 mos; GM-801-13—1 yr; GM-801-12—2 yrs 10 mos.
Education: Bachelor of Science Degree in Engineering Physics; Master of Business Administration.
Name: Individual No. 5.
Organization: ASD.
Program: LANTIRN.
Position: Deputy PM.
Title: Supervisory Systems Management Engineer GM-801-15, assigned—May 1984.
Courses: No formal Acquisition Training.
Total acquisition experience: GM-801-15—10 mos; GM-801-14—2 yrs 10 mos; GM-801-13—8 yrs 10 mos; GM-801-13—2 yrs 10 mos.
Education: Bachelor of Science Degree in Electrical (Electronic) Engineering.
Name: Individual No. 6.
Organization: ASD.
Program: Maverick.
Position: Deputy PM.
Title: Supervisory Systems Management Engineer GM-801-15, assigned—May 1974.
Courses: Executive Refresher Program Management DSMC, completed March 1980.
Total acquisition experience: GM-801-15—10 yrs 10 mos; GM-801-14—13 yrs 9 mos; GM-801-13—3 yrs 4 mos.
Education: Bachelor of Science Degree in Mechanical Engineering.
Name: Individual No. 7.
Organization: ASD
Program: PLSS
Position: Deputy PM.
Title: Supervisory Systems Management Engineer GM-801-14, assigned—June 1984.
Courses: Management of Defense Acquisition Contracts DMET, completed May 1976.
Total acquisition experience: GM-801-14—9 mos.
Education: Bachelor of Science Degree in Electrical Engineering; Master of Business Administration.

Name: Individual No. 8.
Organization: ASD.
Program: T-46A.
Position: Deputy PM.
Title: Supervisory Systems Management Engineer GM-801-14, assigned—November 1981.
Courses: Systems Acquisition Management, completed July 1979.
Total acquisition experience: GM-801-14—3 yrs 8 mos; GM-801-13—3 yrs 3 mos; GM-801-12—1 yr; Lt Col—2 yrs.
Education: Bachelor of Science Degree in Mechanical Engineering; Master of Science in Aerospace Engineering
Name: Individual No. 9.
Organization: ASD.
Program: GLCM.
Position: Deputy PM.
Title: Supervisory Systems Management Engineer GM-801-14, assigned—July 1981.
Courses: Systems Acquisition Management, completed April 1980.
Total acquisition experience: GM-801-14—3 yrs 4 mos; GM-801-13—3 yrs 8 mos; GM-801-1102-12—1 yr.
Education: Bachelor of Science in Math.
Name: Individual No. 10.
Organization: ESD.
Program: Tracals Mls.
Position: PM.
Title: Systems Program Manager GM-801-15, assigned—November 1983.
Courses: Systems Management Training, completed August 1978; Systems Acquisition Management Course, completed June 1971; Mobile Electronic System Packaging, completed May 1983.
Total acquisition experience: GM-801-15—1 yr 4 mos; GM-801-14—3 yrs 5 mos; GM-801-14—1 yr 6 mos; GM-855-13—4 yrs; GM-855-12—6 yrs.
Education: One year of college.
Name: Individual No. 11.
Organization: AD.
Program: SFW.
Position: Deputy PM.
Title: Supervisory General Engineer GM-801-14, assigned—January 1983.
Courses: Program Management Workshop, completed April 1976; Cost Schedule and Control, completed April 1984.
Total acquisition experience: GM-801-14—2 yrs 2 mos; GM-801-13—7 yrs; GM-855-13—5 yrs; GM-855-12—1 yr.
Education: Bachelor of Science Degree in Electrical Engineering, 1964.

QUESTION SUBMITTED BY SENATOR JOHN WARNER

PROGRAM MANAGEMENT

Senator WARNER. General Thompson, how many deputy program managers do you have?

General THOMPSON. AMC currently has 68 (principal) deputy project managers assigned. Grade levels are SES (6), GM-15 (46), GM-14 (9), and GM-13 (3). Six projects have no formally appointed deputy project manager. These projects are provisionally established (awaiting formal chartering) and are minimally staffed at this time.

Senator QUAYLE. Gentlemen, thank you very much. We will continue our communications, and with that, the subcommittee is adjourned until tomorrow at 2 o'clock.

[Whereupon, at 4:16 p.m., the subcommittee adjourned, to reconvene at 2 p.m., on Tuesday, March 12, 1985.]

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